Vol. 59

University Of Southern Mississippi

BULLETIN

GRADUATE PROGRAMS 1971-1972

ACCREDITED BY:

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS

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NATIONAL COUNCIL FOR ACCREDITATION OF TEACHER EDUCATION

THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN

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NATIONAL COMMISSION OF ACCREDITING

COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

MISSISSIPPI ASSOCIATION OF COLLEGES

Graduate Bulletin, 1971-1972

University of Southern Mississippi

ADDENDA

College of Science

The College of Science (pages 176-219) offers the following courses in Environmental Science.

G-401—**Pollution Detection.** Four hours

A study of the composition of natural waters and clean air, water and air quality standards, and the physical, chemical, and biological sampling and testing for water pollutants or air pollutants. Emphasis is one field sampling and field tests.

G-402—**Pollution Analysis.** Four hours.

A continuation of ESC 401 with emphasis on analysing and evaluating pollution abatement systems.

G-411—**Electronics for Scientists.** Four hours.

A modern practical course in electronics necessary for an understanding of the functions and malfunctions of modern electronic instrumentation. The principles of automating laboratory and field measurements are stressed along with digital computer logic circuits.

G-492—I, II, III—**Seminar in Environmental Science I, II, III.** One hour each.

Modern topics in pollution of the environment will be discussed.

Department of Biology

600—**Advanced Problems in Marine Microbiology.** Credits (maximum six hours) and schedules by arrangement.

Prerequisites: Marine Microbiology (BIO 565) and consent of instructor.

Supervised research problems and projects selected to meet the needs of the graduate students of microbiology or marine biology.

604—**Research in Marine Biology.** Credits to be arranged.

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VOLUME 59 JULY 1, 1971 NUMBER 1

UNIVERSITY OF SOUTHERN MISSISSIPPI

BULLETIN

GRADUATE PROGRAMS

1971-1972

FALL QUARTER OPENS SEPTEMBER 6, 1971

Published Quarterly by the University of Southern Mississippi, Hattiesburg, Mississippi. Entered as second-class matter February 19, 1917, at the Post Office at Hattiesburg, Mississippi, under Act of August 24, 1912.

1971

JANUARY

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CALENDAR

GENERAL CALENDAR 1971-1972

FALL QUARTER - 1971

Friday, August 20, 1971
Deadline for making application for admission

Thursday and Friday, September 2 and 3
Various pre-quarter faculty and departmental meetings (faculty on duty)

Sunday, September 5
Dormitories open

Tuesday, September 7
4:00-8:00 P.M. Registration for night and graduate courses

Wednesday, September 8
Registration by appointment
6:30- 8:00 P.M. Monday night classes meet (this week only)
8:30-10:00 P.M. Wednesday night classes meet (this week only)

Thursday, September 9
Continuation of registration by appointment
Last day to register without late registration fee
6:30- 8:00 P.M. Tuesday night classes meet (this week only)
8:30-10:00 P.M. Thursday night classes meet (this week only)

Friday, September 10
8:00 A.M. Classes meet on schedule
8:00 A.M. Fee for adding and dropping courses becomes effective

Friday, September 17
Last day for registering or adding full term Fall Quarter courses

Friday, October 8
Last day for dropping courses without academic penalty

Saturday, October 9
Graduate School Foreign Language Tests

Friday and Saturday, October 15 and 16
Qualifying and Comprehensive Examinations in Education

Monday, October 18
Beginning of second term of Fall Quarter - only date for adding or registering for second term courses

Thursday, October 21
English Proficiency Test

Saturday, October 23
Graduate Record Examinations

Saturday, October 30
Miller Analogies Test

Saturday, November 6
Admission Test for Graduate Study in Business

Friday, November 12
Last day of regularly scheduled classes

Saturday, November 13
National Teacher Examinations

FALL QUARTER - 1971

Monday, November 15
Study period for examinations
Tuesday, Wednesday, Thursday, Friday, November 16, 17, 18, 19
Fall Quarter Examinations

WINTER QUARTER - 1971-1972

Tuesday, November 9, 1971
Deadline for making application for admission for the Winter Quarter
Monday, November 29
5:00 P.M. Registration for night and graduate courses
Tuesday, November 30
Registration by appointment
Wednesday, December 1
Continuation of registration by appointment
Last day of registration without late fee
6:30- 8:00 P.M. Monday night classes meet (this week only)
8:30-10:00 P.M. Wednesday night classes meet (this week only)
Thursday, December 2
8:00 A.M. Classes meet on schedule
8:00 A.M. Fee for adding and dropping courses becomes effective
6:30- 8:00 P.M. Tuesday night classes meet (this week only)
8:30-10:00 P.M. Thursday night classes meet (this week only)
Thursday, December 9
Last day for registering or adding full term Winter Quarter courses
Saturday, December 11
Graduate Record Examinations
Friday, December 17
6:00 P.M. Christmas holidays begin
Monday, January 3, 1972
8:00 A.M. Class work resumes
Saturday, January 8
Miller Analogies Test
Thursday, January 13
Last day for dropping courses without academic penalty
Saturday, January 15
Graduate Record Examinations
Tuesday, January 18
Beginning of second term of Winter Quarter - only date for adding or registering for second term courses
Friday and Saturday, January 21 and 22
Qualifying and Comprehensive Examinations in Education

WINTER QUARTER - 1971-1972

Thursday, January 27
English Proficiency Test
Saturday, January 29
National Teacher Examinations
Saturday, February 5
Graduate School Foreign Language Tests
Admission Test for Graduate Study in Business
Friday, February 18
Last day of regularly scheduled classes
Monday, February 21
Study period for examinations
Tuesday, Wednesday, Thursday, Friday, February 22, 23, 24, 25
Winter Quarter Examinations
Friday, February 25
Last day to file application for May Graduation

SPRING QUARTER - 1972

Tuesday, February 15, 1972
Deadline for making application for admission for the Spring Quarter
Monday, March 6
5:00 P.M. Registration for night and graduate courses
Tuesday, March 7
Registration by appointment
Wednesday, March 8
Continuation of registration by appointment
Last day to register without late fee
6:30- 8:00 P.M. Monday night classes meet (this week only)
8:30-10:00 P.M. Wednesday night classes meet (this week only)
Thursday, March 9
8:00 A.M. Classes meet on schedule
8:00 A.M. Fee for adding and dropping courses becomes effective
6:30- 8:00 P.M. Tuesday night classes meet (this week only)
8:30-10:00 P.M. Thursday night classes meet (this week only)
Thursday, March 16
Last day for registering or adding full term Spring Quarter courses
Saturday, March 18
Miller Analogies Test
Thursday, March 30
University of Southern Mississippi Day
6:00 P.M. Easter holidays begin (Thursday night classes will meet)
Tuesday, April 4
8:00 A.M. Class work resumes
Thursday, April 6
Last day for dropping courses without academic penalty

SPRING QUARTER - 1971-1972

Friday and Saturday, April 7 and 8
Qualifying and Comprehensive Examinations in Education

Saturday, April 8
National Teachers Examinations
Admission Test for Graduate Study in Business

Wednesday, April 12
Beginning of second term of Spring Quarter - only date for adding or registering for second term courses

Saturday, April 15
Graduate School Foreign Language Tests

Thursday, April 20
English Proficiency Test

Friday, April 21
Last day to present signed dissertations to Graduate Office for May Graduation

Saturday, April 22
Graduate Record Examinations

Friday, May 12
Last day of regularly scheduled classes
Last day to present signed thesis to Graduate Office for May Graduation

Monday, May 15
Study period for examinations

Tuesday, Wednesday, Thursday, Friday, May 16, 17, 18, 19
Spring Quarter Examinations

Saturday, May 20
7:30 P.M. Graduation Exercises
Last day to file application for August Graduation

SUMMER QUARTER - 1971-1972

Tuesday, May 16, 1972
Deadline for making application for admission for the Summer Quarter

Monday, June 5
5:00 P.M. Registration for night and graduate courses

Tuesday, June 6
8:00 A.M. Registration by appointment
Only day to register for full quarter or first term courses without late fee

Wednesday, June 7
8:00 A.M. Classes meet on schedule
8:00 A.M. Fee for adding and dropping courses becomes effective
6:30- 8:00 P.M. Monday night classes meet (this week only)
8:30-10:00 P.M. Wednesday night classes meet (this week only)

Thursday, June 8
6:30- 8:00 P.M. Tuesday night classes meet (this week only)
8:30-10:00 P.M. Thursday night classes meet (this week only)

SUMMER QUARTER - 1972

Friday, June 9
Last day for registering or adding first term courses

Wednesday, June 14
Last day for registering or adding full quarter courses
Last day for dropping first term courses

Saturday, June 17
Graduate Record Examinations

Friday, June 23
Last day for dropping full quarter courses without academic penalty
Deadline for making application for admission for the second term of the Summer Quarter

Saturday, June 24
Admission Test for Graduate Study in Business

Friday, July 7
First term examinations

Saturday, July 8
Miller Analogies Test

Monday, July 10
8:00 A.M. Registration for second term of Summer Quarter
Second term courses may be added without change of schedule fee

Wednesday, July 12
Last day for registering or adding second term courses

Thursday, July 13
English Proficiency Test

Friday, July 14
Last day to present signed dissertations to Graduate Office for August Graduation

Friday and Saturday, July 14 and 15
Qualifying and Comprehensive Examinations in Education

Saturday, July 15
National Teacher Examinations

Monday, July 17
Last day for dropping second term courses

Saturday, July 22
Graduate School Foreign Language Tests

Friday, August 4
Last day of regularly scheduled classes
Last day to present signed thesis to Graduate Office for August Graduation

Monday, August 7
Study period for examinations

Tuesday, Wednesday, Thursday, Friday, August 8, 9, 10, 11
Summer Quarter Examinations

Saturday, August 12
7:30 P.M. Graduation Exercises

PART ONE

GENERAL ADMINISTRATION

BOARD OF TRUSTEES

ADMINISTRATIVE OFFICERS

THE GRADUATE COUNCIL

THE GRADUATE FACULTY

GENERAL ADMINISTRATION

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1. On Leave, 1970-1971.
2. On Leave, Winter and Spring

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POST-DOCTORAL FELLOWS

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JAI KRISHNA KHANDELWAL, B.S., M.S., Ph.D. . . . . Post-Doctoral Fellow in Chemistry.
B.S., M.S., Ph.D., Agra University.

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1. Leave of Absence, 1970-1971.
2. Effective, December 1, 1970
3. Effective, Spring Quarter, 1970-1971
4. Leave of Absence, Winter and Spring
5. Resigned, December 1, 1970

PART TWO

THE GRADUATE SCHOOL

THE GRADUATE SCHOOL

The Graduate School at the University of Southern Mississippi was established in 1947 to recognize the University's growing responsibilities as a center of higher learning, and to provide an academic environment in which advanced research and free inquiry could develop to the advantage of both the student and the State. In the years since 1947, the University's graduate programs have developed logically on the growing points of strong undergraduate schools and departments to meet the needs for professional competence beyond the academic measure of the baccalaureate degree.

The Graduate School's Place Within the University Structure

The Graduate School is administered by a dean executing policies determined by the Graduate Council of which the Dean of the Graduate School serves as chairman.

The present composition of the Graduate Council (see Part I) includes the Dean of the Graduate School as chairman with two representatives from the College of Education and Psychology and one representative each from the College of Liberal Arts, the College of Science, the School of Business Administration, the School of Fine Arts, the School of Health, Physical Education and Recreation, and the School of Home Economics. Council members are appointed by the President of the University upon the recommendation of the Dean of the University. Permanent **ex officio** members are the President of the University and the University Librarian. The University Registrar serves as secretary to the Council.

The responsibilities of the Graduate Council, representing both administration and faculty, include:

1. Determining policies of admission to the Graduate School.

2. Considering and approving graduate programs submitted to the Council through curriculum committees of each college and school.

3. Electing members to the Graduate Faculty upon recommendation by the academic deans.

4. Approving new courses and deleting courses for graduate credit.

5. Acting upon any other problems affecting graduate programs.

The graduate programs approved by the Council are carried out through the Graduate Faculty (see Part I of this **Bulletin**) in each degree-granting college or school of the University's academic organization.

Degree and Specialist Programs Offered

The University of Southern Mississippi now offers graduate level programs in nearly every recognized academic discipline. Even those departments not yet ready to offer master's or doctoral degrees are usually equipped to offer a graduate minor.

The degrees which are offered and their fields are listed below.

DOCTOR OF PHILOSOPHY

Biology
Chemistry
Communication
Educational Administration
Elementary Education
English
Guidance
Physical Education
History
Mathematics
Music Education
Political Science
Psychology (Clinical)
Psychology (General - Experimental)
Secondary Education
Special Education
Speech and Hearing Sciences

DOCTOR OF EDUCATION

Educational Administration
Educational Psychology
Elementary Education
Guidance
Physical Education
Psychology
Psychology (Clinical)
Secondary Education
Science Education
Special Education

DOCTOR OF MUSIC EDUCATION

Music Education

MASTER OF PHILOSOPHY

Biology
Chemistry
English
Geography
History
Mathematics
Political Science
Science Education
Speech and Hearing Sciences

SPECIALIST CERTIFICATE

Business Education
Curriculum and Supervision
Educational Administration
Educational Research
Elementary Education
Guidance and Counseling
Secondary Education

MASTER OF ART EDUCATION

Art Education

MASTER OF ARTS

Biology
Chemistry
Communication
Comparative Literature
Economics
English
Foreign Language
Geography
Geology
History
Latin American Studies
Library Science
Mathematics
Philosophy
Political Science
Polymer Science
Psychology
Sociology
Speech and Hearing Science
Theatre Arts

MASTER OF SCIENCE

Accounting
Biology
Business Education
Chemistry
College Counseling
Communication
Community Counseling
Economics
English
Foreign Language
Geography
Geology
Health
History
Home Economics
Industrial Arts
Library Science
Mathematics
Physical Education
Physics
Political Science
Polymer Science
Psychology
Reading
Recreation
Science Education
Secondary Education
Speech and Hearing Sciences
Vocational Technical Education

MASTER OF EDUCATION

Business Education
Early Childhood Education
Educational Administration
Elementary Education
School Counseling
Science Education
Secondary Education
Special Education
Supervision of Instruction

MASTER OF BUSINESS ADMINISTRATION

Business Administration

MASTER OF MUSIC

Applied Music
Church Music
Music History and Literature
Theory-Composition

MASTER OF MUSIC EDUCATION

Music Education

The undergraduate, master's, and specialist programs in teacher education are accredited by the National Council for Accreditation of Teacher Education. All graduate programs in Music are approved by the National Association of Schools of Music.

See Part V of this **Bulletin** for the department curricula covering each of these degrees and the specialist programs.

PART THREE

ADMISSION REQUIREMENTS AND PROCEDURES

FINANCIAL INFORMATION

ADMISSION REQUIREMENTS AND PROCEDURES

Since applicants must always be admitted to a specific program within the Graduate School, all applications for admission to the Graduate School are closely reviewed and must be approved by the chairman of the department in which the student intends to study, by the school or college dean, and by the Graduate Dean. Admission forms are procurable from and should be submitted to the University Admissions Office.

The aptitude phase (verbal and quantitative sections) of the Graduate Record Examinations is required of all applicants to the Graduate School except in the School of Business Administration which requires the Admission Test for Graduate Study in Business. Prospective students should plan to take the appropriate examination, given several times a year at a number of university testing centers, early in their senior year and request that a copy of their scores be sent to the Graduate Office. The dates set for these examinations are listed in the General Calendar of this **Bulletin**. Applications are available in the Graduate Office.

The academic record, character, and conditions of application of the applicant must be in accordance with the rules and regulations of the Board of Trustees of State Institutions of Higher Learning and with the laws of the State of Mississippi. The applicant must have excellent moral character in conformity with the generally accepted standards customarily in effect in the University.

The University reserves the right to cancel the admission or registration of an individual whose attendance at the University, in the opinion of the appropriate administrative officer and the President, would not be mutually beneficial to himself and to the institution.

It should be clearly understood that the admission requirements listed below represent the minimal standards set by the Graduate Council and that additional requirements and higher standards may well be stipulated by the various department chairmen.

TYPES OF ADMISSION TO MASTER'S PROGRAMS

I. Regular Admission:

A. The applicant must hold a baccalaureate degree from an institution approved by a recognized accrediting agency.

B. The applicant must be eligible to re-enter in good standing the last college or university he attended.

C. The applicant must present evidence, by official transcript (two copies), of a grade-point average of at least 2.75 (figured on an A equals 4.0 scale) for the last two years of undergraduate study, and a grade-point average of at least 3.0 on undergraduate courses in the field of proposed graduate study. Any exception to this requirement must be cleared with the appropriate department chairman, the dean concerned, and the Graduate Dean.

D. The applicant must present a combined score of 750 or above on the aptitude sections of the Graduate Record Examinations or a total score of 400 or above on the Admission Test for Graduate Study in Business. Certain departments within the University require higher totals and/or the advanced section of the Graduate Record Examinations. Consult specific departmental requirements for this information.

E. The appropriate department chairman, the school or college dean, and the Graduate Dean must be satisfied that the applicant shows promise of satisfying graduate degree requirements.

II. Conditional Graduate Student:

A student who does not meet the minimum admission standards for either grade-point average or Graduate Record Examinations may be admitted on a conditional basis in one of two ways:

A. He must present a score of 750 or above on the aptitude sections of the Graduate Record Examinations or a total score of 400 or above on the Admission Test for Graduate Study in Business and a grade-point average no lower than 2.5.

B. He must present a grade-point average of 2.75 or above if he has scored lower than 750 on the aptitude sections of the Graduate Record Examinations or lower than 400 on the Admission Test for Graduate Study in Business.

Conditional admission can be given only upon the specific recommendation of the department chairman, the school or college dean, and the Graduate Dean.

A conditional graduate student must meet the following conditions if he is to continue in the Graduate School:

A. If his first enrollment is as a full-time student, he must make grades of B or better on each graduate course attempted during that first quarter.

B. If his first enrollment is as a part-time student, he must make grades of B or better on his first twelve (12) quarter hours, or grades of B or better on all courses taken while completing the twelve-hour requirement.

All courses taken to remove conditional admission must be taken on the Hattiesburg campus. Upon the recommendation of the department chairman and the Graduate Dean, the conditional admission may be removed and the student reclassified as a regular student.

III. Special Graduate Student:

Admission as a special graduate student may be granted a student for any of the following reasons:

A. He can not meet requirements for a conditional or regular admission but desires to enroll in graduate courses.

B. He may or may not be able to meet admission requirements, but does not desire to work toward a graduate degree.

C. He is enrolled in another graduate school and desires to take work at the University of Southern Mississippi to be transferred to the graduate school in which he is seeking a degree.

A special graduate student must hold a baccalaureate degree from an accredited institution. If he should decide to become a degree-seeking student, he must meet the grade-point average and Graduate Record Examinations requirements for regular or conditional admission.

A student may remain classified indefinitely as a special graduate student; however, no more than sixteen (16) quarter hours earned while classified as a special graduate student may be applied toward a graduate degree at the University of Southern Mississippi. The Graduate Dean may revoke the admission of a special graduate student should his work become unsatisfactory.

Special graduate students desiring to enroll on the Hattiesburg campus will be expected to file an application for admission by the appropriate deadline.

Students may be admitted as special graduate students to the School of Business Administration only if they have undergraduate grade point averages of 2.75 or above.

A graduate student of any classification may count a total of no more than sixteen (16) quarter hours of extension work, transfer work, resident center work, and special graduate work toward a master's degree.

TYPES OF ADMISSION TO ADVANCED GRADUATE STUDY

Three advanced level programs are available for students who hold a master's degree and who wish to do additional graduate work. The first of these programs leads to the Educational Specialist Certificate, the second to the Master of Philosophy degree, and the third to the various doctoral degrees.

I. Regular Admission:

For regular admission to advanced graduate study a student must present a grade point average no lower than 3.25 for the specialist and the Master of Philosophy programs or 3.50 for the doctoral program on previous graduate work and a score no lower than 800 for the specialist and the Master of Philosophy programs or 850 for the doctoral program on the aptitude phase of the Graduate Record Examinations.

II. Conditional Admission:

For conditional admission to advanced graduate study a student must present either (a) a grade point average of between 3.00 and 3.25 for the specialist and the Master of Philosophy programs or 3.25 and 3.50 for the doctoral program on previous graduate work and a Graduate Record Examinations score no lower than 800 for the specialist and the Master of Philosophy programs or 850 for the doctoral program or (b) a grade point average no lower than 3.25 for the specialist and the Master of Philosophy programs or 3.50 for the doctoral program and a Graduate Record Examinations score between 750 and 800 for the specialist and the Master of Philosophy programs or 800 for the doctoral program.

Conditional status at the advanced graduate level may be removed on the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first twelve (12) or sixteen (16) hours of course work numbered 500 or above or on all courses taken while completing this requirement.

To be admitted to advanced graduate study, the student must submit a formal application through the Admissions Office even though he may have successfully completed a master's degree program at the University of Southern Mississippi. Acceptance as an advanced graduate student is contingent upon the approval of the department chairman, the school or college dean, and the Graduate Dean.

III. Special Graduate Student:

An applicant for advanced study may be admitted as a special graduate student under the same conditions outlined for a master's degree applicant.

Limitations on University Faculty Members

Members of the faculty of the University of Southern Mississippi above the rank of instructor cannot become candidates for a doctoral degree at this institution. They may, however, enroll for graduate courses. Faculty members of the rank of instructor may become candidates for doctoral degrees at the University of Southern Mississippi on the same terms as any other advanced graduate student candidates.

PROCEDURES FOR APPLYING FOR ADMISSION

I. Application materials are available from the Director of Admissions, Southern Station, Box 11, Hattiesburg, Mississippi 39401.

II. All credentials (application, recommendations, two official transcripts from each institution attended) must be submitted to the Director of Admissions by the deadline published in the University Calendar.

III. After all credentials are received, the Admissions Office will compute the applicant's grade point average and will forward the application and transcripts to the appropriate department chairman, school or college dean, and the Graduate Dean. As soon as the application has been processed by the department chairman, the school or college dean concerned, and the Graduate Dean, the Director of Admissions will notify the applicant of the University's decision on his request for admission.

Permission for Undergraduate Seniors to Register for Graduate Credit

Exceptionally well qualified undergraduate students at the University of Southern Mississippi may apply to the Graduate Office for permission to take course work for graduate credit if they are within (8) quarter hours of meeting bachelor's degree requirements as certified by the Registrar. If the Graduate Dean approves, the student may then register for graduate courses up to a maximum of eight (8) quarter hours of graduate credit with a total course load not exceeding sixteen (16) quarter hours. The student must complete requirements for the baccalaureate degree within the first quarter in which he registers for graduate courses. The student's application for admission to the Graduate School will not be given final approval until after he satisfies all requirements for the baccalaureate degree.

STUDENT EXPENSES

The University of Southern Mississippi is supported chiefly by legislative appropriations. Increases in student fees are put into effect only when public support funds are inadequate and no other recourse is available. Increases are

made only for support of the institution or improvement of the activity program of the student; therefore **the University must reserve the right to increase or modify fees and expenses without prior notice but with approval of the Board of Trustees of State Institutions of Higher Learning.**

Fees and expenses are in the form of incidental fees, room and board, and special fees.

INCIDENTAL FEE. This fee, together with the allocation from the legislative appropriation, is used for general support of the University and consists of charges for matriculation, library, textbook service, athletic activities, health service, University Union, University newspaper, laboratory, concert series, maintenance, administrative and academic salaries, etc. Athletic activities, health service, UAC programs, and newspaper are not included for part-time students.

Full-time students for purposes of assessing fees are as follows: Graduate School, nine (9) or more quarter hours; all other schools and colleges, twelve (12) or more quarter hours. Students enrolled for more than eighteen (18) hours will be assessed the applicable fee for each additional quarter hour. (Students training under Veterans Administration programs on the graduate level are required by the Veterans Administration to carry a minimum of twelve (12) quarter hours for the entire quarter to receive full subsistence.)

Clinical and hospital services covered by the health service charge included in the incidental fee are limited to cases of ordinary illness. Services are provided within the limits of the professional, technical, and physical resources of the Clinic. The University does not assume responsibility in cases of extended illness or for treatment of chronic diseases. Cases requiring surgery must be handled by a physician and hospital of the student's choice.

ROOM AND BOARD. The room and board fees are assessed for all students living in University-controlled dormitories and those students living in fraternity houses. All students rooming in dormitories or fraternity houses are required to take their meals in the University Commons. Students living in Elam Arms and Hillcrest will eat in the cafeterias in those residence halls.

A room deposit of $15.00 is payable in advance for the reservation of space in the dormitories. This amount is held as a breakage deposit until a student withdraws from the dormitory.

A student accepting dormitory space will be financially obligated to pay a full quarter's room rent. A refund of the dormitory fee will be made only upon withdrawal from the University.

OTHER FINANCIAL INFORMATION. Fees of all students are due and payable at time of registration; however, fees of full-time students may be paid one-half upon entrance and the balance one week prior to the beginning of the second half of the quarter.

The University reserves the right to withhold readmission to a student until all delinquent accounts have been paid. Transcripts of credits will not be issued for students whose accounts are delinquent.

Fines accumulated as a result of failure to adhere to the established procedures of the University, such as Library and Security regulations, or any other policy establishing regulations for the protection of University property shall become collectible by the Business Office, and if not collected shall constitute a delinquent account.

A fee of $2.00 is assessed each quarter to all full-time students for operation of the University Union. A $1.00 fee is added to the incidental fee assessment of part-time students.

Courses requiring special fees and music fees are shown in the Special Fee listing (Table II)).

A fee of $6.50 for **The Southerner** (University annual) is payable each school year by all full-time undergraduate students.

NON-RESIDENT STATUS. The Legislature of the State of Mississippi has passed the following legislation concerning non-resident status:

The board of trustees of each junior college in this state, the board of trustees of state institutions of higher learning, and the administrative authorities of each institution governed by said boards, in ascertaining and determining the legal residence of and tuition to be charged any student applying for admission to such institutions, shall be governed by the following definitions and conditions:

Legal residence of a minor. The residence of a person less than twenty-one (21) years of age is that of the father. After the death of the father, the residence of the minor is that of the mother. If the parents are divorced, the residence of the minor is that of the parent who was granted custody by the court; or, if custody was not granted, the residence continues to be that of the father. If both parents are dead, the residence of the minor is that of the last surviving parent at the time of that parent's death, unless the minor lives with a legal guardian of his person, duly appointed by a proper court of Mississippi, in which case his residence becomes that of the guardian.

Legal residence of an adult. The residence of an adult is that place where he is domiciled, that is, the place where he actually physically resides with the intention of remaining there indefinitely or of returning there permanently when temporarily absent.

Removal of parents from Mississippi. If the parents of a minor who is enrolled as a student in an institution of higher learning move their legal residence from the State of Mississippi, the minor is immediately classified as a non-resident student.

Twelve months of residence required. No student may be admitted to any institution of higher learning as a resident of Mississippi unless his residence, as defined hereinabove, has been in the State of Mississippi for a continuous period of at least twelve (12) months immediately preceding his admission.

Residence in an educational institution not counted. A person who has entered the State of Mississippi from another state and enters an educational institution within twelve (12) months is considered a non-resident. For this reason, any period of time when such a person is enrolled in any educational institution in Mississippi may not be counted as any part of the twelve (12) months prerequisite to his admission to an institution of higher learning as a resident student. Even though he may have been legally adopted by a resident of Mississippi, or may have been a qualified voter, or a landowner, or may otherwise have sought to establish legal residence, such a person will still be considered as being a non-resident of Mississippi if he has entered this state for the purpose of enrolling in an educational institution.

Residence status of a married woman. A married woman may claim the residence status of her husband, or she may claim independent residence status under the same regulations, set forth above, as any other adult.

Children of parents who are employed by institutions of higher learning. Children of parents who are members of the faculty or staff of any institution under the jurisdiction of the board of trustees may be classified as residents during the time that their parents are such faculty or staff members without regard to the residence requirement of twelve (12) months, for the purpose of attendance at the institution where their parents are faculty or staff members.

Aliens. All aliens are classified as non-residents.

Students holding fellowships. Non-resident students holding University financed fellowships will not be required to pay the non-resident fee during the time they hold such appointments.

REFUND POLICY. A student who officially withdraws from the University after enrollment may obtain a refund in accordance with the following:

a. A refund of 80% of incidental and special fees paid will be made to a student who withdraws within the week following the week of registration.

b. A student who withdraws for any reason prior to mid-term of any quarter but after the week following the week of registration will be refunded 50% of the incidental and special fees.

c. A full-time student who withdraws after midterm of any quarter will not be entitled to a refund of fees.

d. No adjustment of incidental and special fees will be made when courses are dropped after the week following the week of registration.

e. Room and board fees are refunded on the basis of full weeks remaining in the quarter.

TABLE I

EXPENSES EACH QUARTER

(All fees are subject to change without notice. See page 42)

FULL-TIME STUDENTS	
Fixed Fees	
Incidental Fee	$159.00
*Room rent—air-conditioned dormitory	100.00
Room rent—other dormitory	70.00
*Board	90.00
Other Fees When Applicable	
Non-resident fee	$200.00
The Southerner	6.50
Post Office box, per quarter	1.25
PART-TIME STUDENTS—Each quarter hour	
Incidental fee—graduate student	$ 18.00
Non-resident fee—graduate student	23.00
*Hillcrest (Room and Board)	$248.00
Elam Arms (Room and Board)	248.00
Vann Hall (Room and Board)	210.00

TABLE II

SPECIAL FEES AND EXPENSES

Music Fees–Private Lessons for other than full-time music majors:	
1 quarter hour per instructor	$19.00 per quarter
2 quarter hours per instructor	36.00 per quarter
3 quarter hours per instructor	53.00 per quarter
Each additional supervised lesson	17.00 per quarter
Orchestral or Band Instrument rental*	6.00 per quarter
Summer Conferences and Workshops:**	
Aviation Education Workshop	
Library Science Workshop	
Preschool Teachers Workshop	
Reading Conference	
School Lunch Managers Workshop	
Special Education Workshop	
Summer Music Camp	
Examinations and Graduation:	
Miller Analogies Test	$3.50 when applicable
Revalidation Examination	5.00 when applicable
Special Examination	3.00 when applicable
Graduation fee–***	
Master's	12.00 with application for degree
Specialist Certificate	12.00 with application for certificate
Doctoral	90.00 with application for degree
Thesis binding per copy	4.50 when applicable
Registration and Records:	
Change of Schedule	$ 5.00 when applicable
Audit Fee–(non-credit)****	9.00 per quarter hour
Late Registration	10.00 full load 5.00 partial load
Application fee for foreign students (Non-refundable)	10.00 with application
Memorandum credits	.50 when applicable
Transcript of credits	1.00 when applicable

*This fee applies to music majors and minors as well as to other students.

**The fees for the above conferences and workshops will be listed in the brochures published for each conference. The conference and workshop fees do not include the assessment for incidental fee where University credit is desired, nor do they include the conference charge for room and board.

***Requests for refund of this fee will be based on circumstances existing at the time of request in accordance with policy on file.

****An audit fee is charged when the student does not wish to receive credit in a course. Courses such as physical education activity courses, typing, shorthand, and Foreign Language 173 will be assessed at the full rate ($18.00 graduate) even though the student registers as an auditor.

AVAILABLE FINANCIAL ASSISTANCE FOR GRADUATE STUDENTS

At present the University has available some 180 master's and 50 doctoral University fellowships in all areas as well as fellowships provided by federal and private agencies. Though amounts may vary from department to department, University fellowships average $1500 per year at the master's level and $2000 at the doctoral level -and entail a teaching or research assignment. Out-of-state tuition, though not the incidental fee, is currently waived for fellowship holders. The University also currently waives out-of-state tuition for a limited number of Regional Merit Scholars and for students on sabbatical leave from schools and colleges.

Inquiries regarding fellowships should be directed to the Graduate Office.

EQUAL EDUCATION OPPORTUNITY POLICY

The University of Southern Mississippi does not discriminate on grounds of race, color, or national origin.

PART FOUR

GENERAL ACADEMIC REGULATIONS AND REQUIREMENTS

GENERAL ACADEMIC REQUIREMENTS

It is reasonable to assume that a graduate student accepts full responsibility for knowing the policies and regulations of the Graduate School and the departmental requirements relevant to his individual degree program.

Only the general academic regulations and requirements governing all graduate programs are given below. Specific requirements pertaining to individual degree programs are outlined within the departmental sections.

Course Work and Grading System

Courses open to graduate students are of two categories: (1) those numbered G-300 to G-499 which are open to advanced undergraduates as well as to graduate students; and (2) those numbered 500 or above which are open only to graduate students.

Students registered for any course numbered from G-300 to G-499 are required to have graduate standing before the extra work required for graduate credit may properly be assigned or graduate credit granted. The assignment of this extra work is left to the discretion of the instructor concerned but should approximate a fifty per cent increase in laboratory or library work over that required of undergraduate students in the same course.

All courses have certain prerequisites. A student who wishes to register for a particular course must satisfy the department concerned that he has had preparation adequate for admission to the course.

The grading system in the Graduate School is as follows:

A—Indicates that the student's work is of unusually high quality.

B—Indicates that the student's work is of high but not exceptional quality.

C—Indicates that the student has met the minimum requirements for passing the course.

D—Indicates that the student's work is below that which is expected of a graduate student. A course in which the student has earned a grade of D will not apply toward a graduate degree. A student who earns more than eight hours in grades of D or below may not be considered as a candidate for a degree. Retaking a course will not remove this disability.

F—Indicates that the student has failed the course. A student who accumulates more than four (4) quarter hours of F grades will not be considered as a candidate for a degree. Retaking a course will not remove this disability.

An average of B or better is required of all candidates for graduate degrees by the time they complete the course-hour requirements for the degree.

In computing averages, a C must be balanced by one A, a D by two A's, and an F by three A's of equal graduate credit.

The one-year limitation for an "Incomplete" to be removed does not apply to theses. The general regulation that degree work must be completed within a six-year period does apply.

Course Loads

I. Although the maximum load of a full-time graduate student is seventeen (17) quarter hours, the normal load for a full-time graduate student is generally considered to be twelve (12) quarter hours; the normal time required for a master's degree is thus four quarters.

II. The minimum load for a full-time graduate student is nine (9) quarter hours for the purpose of living in Pine Haven, using the services of the Clinic, for Selective Services deferments, and other such requirements.

III. The usual load for a part-time student with a full-time position is four (4) hours. A maximum of eight (8) hours may be carried by such a student provided the faculty adviser and department chairman approve.
(Teachers should note that the Mississippi State Department of Education allows a full-time teacher to take only four (4) hours per quarter.)

IV. Thirteen (13) hours is the maximum load for a graduate fellow teaching one undergraduate class or its equivalent. In no case may the total hours involved in a student's program, including both his course work and his fellowship assignment, exceed seventeen (17) hours.

V. The incidental fee for the full load of nine (9) quarter hours will be the same amount as paid by graduates for a normal load of twelve (12) hours.

VI. The course numbered 507, 697, 797 – **Independent Study and Research** – may be taken for any amount of credit with the exception that students who are not in residence but who are actively working on a thesis or dissertation and consulting with the major professor or making use of the library or other University facilities must enroll for four (4) quarter hours each quarter.

MASTER'S DEGREE REQUIREMENTS

A convenient checklist of master's degree requirements may be procured in the Graduate Office.

I. Credit Hours:

A minimum of forty-six (46) quarter hours credit is required for any master's degree.

II. Time Limitation:

The student must complete the master's degree within six calendar years from the date of initial enrollment as a graduate student. Six years is the maximum age allowed for graduate credits toward a master's degree. If more than six years are needed to complete requirements, the Graduate Dean, under extenuating circumstances, may revalidate over-age credit hours if the original credit was earned at the University of Southern Mississippi and if the dean of the college or school concerned approves the revalidation. The revalidation is secured by the student's successfully passing a special examination on the course. However, any student who fails to complete his master's degree program within the six-year time period becomes subject to any changes in degree requirements made at any date six years prior to his graduation. The fee charged for the special revalidation examination is $5.00 per course. This fee is to be paid before the revalidation examination is taken. Over-age extension courses can not be revalidated.

III. Credit Hour Limitations:

A. A minimum of thirty (30) quarter hours must be earned on the University's Hattiesburg campus for all master's degree except for the Master of Business Administration which requires twenty-four (24) hours.

B. A minimum of twenty-four (24) quarter hours must be in courses numbered 500 or above.

C. As many as nine (9) quarter hours of graduate credit from other accredited institutions may be transferred to the student's program with the approval of the appropriate department chairman and the Graduate Dean provided that the course work transferred falls within the six-year period allowed for the degree.

D. As many as eight (8) quarter hours of course work taken by extension may be accepted toward the master's degree provided that such courses were taught by a member of the University of Southern Mississippi graduate faculty.

E. However, a student may apply a total of no more than nine (9) quarter hours by extension and/or transfer toward a master's degree, and, as previously stated, a total of no more than sixteen (16) quarter hours of extension work, transfer work, resident center work, and work earned as a special graduate student may be applied toward a master's degree. Candidates for the MBA degree must earn a minimum of twenty-four (24) quarter hours on the University's Hattiesburg campus and may transfer a total of twenty-four (24) quarter hours of resident center work toward their master's degree. All resident center work credited toward the MBA degree must be completed in courses taught by approved Graduate School faculty members from the University's Hattiesburg campus, School of Business Administration.

F. No more than twelve (12) quarter hours earned in institutes may be applied toward a master's degree.

IV. The Master's Committee:

The student's work toward the master's degree is supervised by a departmental committee composed of a chairman and two members recommended by the department chairman and appointed by the Graduate Dean.

V. The Minor Field:

If a minor field is required in the master's program, it shall consist of sixteen (16) quarter hours of course work.

VI. The Master's Thesis:

Although the degree of Master of Arts usually entails the writing of a thesis, the thesis requirement is generally optional for the Master of Science and the Master of Education degrees. Students intending to pursue a degree higher than the master's are encouraged to write a thesis.

A separate bulletin outlining University requirements concerning the preparation of theses is available in the Graduate Office.

VII. Examinations:

A. The aptitude phase of the Graduate Record Examinations or the Admission Test for Graduate Study in Business is required for admission into the Graduate School. Individual departments may require the advanced area tests.

B. The Graduate School Foreign Language Test is required for some master's degrees, particularly the Master of Arts. Languages other than French, German, Spanish, and Russian must be approved by the department chairman and the Graduate Dean. The dates of these exami-

nations are listed in the University Calendar and students may procure the proper registration forms in the Graduate Office.

C. If a master's degree student has not had an English writing proficiency test on the undergraduate junior or senior level, he will be required to take the University English Proficiency Test.

D. In addition to regular course examinations, final comprehensive examinations are required for master's degrees. The major department will determine whether the comprehensive examination will be written or oral or both. The written comprehensive, if required, will be prepared by the student's committee and will cover the area of the major field. If an oral examination is required, the chairman of the student's committee will send written notices of the time and place of the examination to the examiners and to the student and will conduct the examination. Comprehensive examinations, whether written or oral, will be administered no later than the seventh week of the quarter in which the student expects to receive his degree and their results reported by the department chairman to the Registrar and to the Graduate Office no later than Monday of the eighth week of that quarter. A student who fails the comprehensive examination may not retake the examination until its next regular administration and may repeat the examination only once.

EDUCATIONAL SPECIALIST CERTIFICATE REQUIREMENTS

The Educational Specialist Certificates earned in the departments of Educational Administration and Supervision, Business Education, Curriculum and Instruction, and Guidance provide sixth-year programs designed to prepare students for positions in school administration, advanced technical education for business, teacher training, and guidance and counseling. Individual programs and requirements are fully described in the departmental sections of this Bulletin.

Students who are seeking the Educational Specialist Certificate must meet all degree requirements relating to the master's degree, must earn at least forty-six (46) quarter hours beyond the master's degree, must write an acceptable thesis and defend it in an oral examination, and must complete one full-time quarter of residence taking all twelve (12) hours on the Hattiesburg campus.

Credit earned in institutes cannot be applied toward a specialist certificate.

THE MASTER OF PHILOSOPHY DEGREE REQUIREMENTS

The Master of Philosophy (M.Phil.) provides a directed semiterminal degree beyond the master's in a subject area primarily for the benefit of junior college faculties. At present the Southern Association of Universities and Colleges

requires that "in all colleges at least forty percent of the teaching faculty should possess professional preparation equivalent to two years of advanced study beyond the bachelor's degree." This degree more than fulfills this requirement and in addition provides an intermediate stepping stone for the student who wishes to pursue the Doctor of Philosophy at a later time.

General Requirements

I. The program consists of a minimum for forty-six (46) hours of work beyond the master's degree or ninety-two (92) hours beyond the bachelor's degree in one subject matter area of which no more than six (6) hours can be in thesis research. With departmental permission, a related minor of twelve (12) hours can be elected. At least one-half of the work in both the major and minor areas must be in courses numbered 500 or above. No more than twelve (12) quarter hours or nine (9) semester hours by extension or transfer can apply to the degree nor is any institute or project credit applicable. Junior college teachers can substitute a course in the philosophy and administration of the junior college for one of their minor area courses.

II. Proficiency in a foreign language or, with departmental permission, in computer science and/or statistics is required unless the student's master program includes such a requirement.

III. One quarter of full-time work on the Hattiesburg campus constitutes the residency requirement for the degree.

IV. A departmental qualifying examination, a thesis of considerable scope, a written comprehensive examination covering the entire discipline, and a final oral examination of the thesis are required.

V. Since the work done for the Master of Philosophy degree is applicable to the Doctor of Philosophy degree, it can be awarded only by departments authorized to grant the Doctor of Philosophy degree, and all departments presently so authorized are permitted to grant the Master of Philosophy. At present, these areas are biology, chemistry, English, geography, history, mathematics, political science, science education, and speech and hearing sciences.

Completion of the Doctor of Philosophy Degree

1. In order to achieve the Doctor of Philosophy degree the student holding a Master of Philosophy degree must take at least thirty-six (36) additional hours of course work, of which twelve (12) hours may be in research leading to the dissertation and of which twenty (20) must be in courses numbered 500 or above.

2. He must spend three (3) consecutive quarters of full-time study on the Hattiesburg campus in order to fulfill the residency requirement.

3. He must achieve proficiency in a second language (or in computer science and/or statistics) if he has not previously done so.

4. He is required to take a rigorous written examination in the specialized area of his discipline in which he plans to write his dissertation.

5. He must write an acceptable dissertation and defend it orally.

DOCTORAL DEGREE REQUIREMENTS

A convenient checklist of doctoral degree requirements may be procured in the Graduate Office.

I. Credit Hours

All doctoral degrees entail a minimum of 118 quarter hours of course work beyond the bachelor's degree or seventy-two (72) quarter hours of course work beyond the master's degree.

II. Time Limitation:

Courses taken above the master's degree or its equivalent which will fit into the degree program but which are six or more years old at the time of admission to the advance graduate program may be counted toward meeting degree requirements when recommended by the department chairman and approved by the Graduate Dean.

The degree requirements must be completed within a period of six years after the student has been admitted to advanced graduate standing at the University of Southern Mississippi.

III. Credit Hour Limitations:

A. A minimum of forty-eight (48) hours of work beyond the master's degree must be earned on the University's Hattiesburg campus.

B. Transfer of credit for graduate work done at other institutions must be approved by the department chairman and Graduate Dean. Final evaluation of and acceptance of transfer credit will not be made until the student has been in residence for one quarter. Transfer of credit for doctoral degree programs is limited to not more than six (6) semester hours or nine (9) quarter hours beyond the master's degree. Exceptions to this restriction may be made with the approval of the department chairman and the Graduate Dean.

C. No credit earned in institutes can be applied toward a doctoral degree.

D. No more than sixteen (16) quarter hours earned as a special graduate student may be applied toward a doctoral degree.

IV. Residency:

The residence requirement for a doctoral degree consists of three consecutive quarters during which the student devotes his full time to graduate work and so earns a minimum of twelve (12) hours of credit for each of the three quarters.

A student who holds a fellowship or an assistantship may fulfill this residence requirement by earning a total of thirty-six (36) hours of credit during consecutive quarters on the Hattiesburg campus of the University. The summer quarter may be counted in this sequence at the option of the candidate. A student may not fulfill the residency requirements if he is employed in a regular position.

V. The Doctoral Committee:

The student's work toward the doctoral degree is supervised by a departmental committee composed of a chairman and four members recommended by the department chairman and appointed by the Graduate Dean.

VI. The Minor Field:

If a minor field is required in the doctoral program, it shall consist of sixteen (16) quarter hours of course work and may consist of courses from a number of related areas.

VII. Examinations:

A. The aptitude phase of the Graduate Record Examination or the Admission Test for Graduate Study in Business is required for admission into the Graduate School. Individual departments may require the advanced area tests.

B. The Miller Analogies Test is required of all doctoral students in the College of Education and Psychology.

C. If a doctoral student has not had an English writing proficiency test on either the baccalaureate or master's level, he will be required to take the University English Proficiency Test.

D. The foreign language and statistics requirements for the doctoral degree may be fulfilled in several ways:

1. The Doctor of Education degree does not require foreign language proficiency. However, the student must establish proficiency in statistics or computer science either by examination or by completing a prescribed course sequence, the credit hours for which do not apply toward the degree. Doctor of Music Education students refer to doctoral programs in Music Education.

2. The Doctor of Philosophy degree requires either (1) proficiency in two languages, (2) proficiency in one language and in statistics or computer science, or (3) proficiency in one language and the completion of a twelve-hour minor, the hours for which do not apply toward the degree. Languages other than French, German, Spanish, and Russian must be approved by the department chairman and the Graduate Dean. The particular option followed by the student must have the approval of the department chairman.

E. All students must take a written and/or oral doctoral qualifying examination in their field and in the College of Education and Psychology in the Foundations of Education as well. This examination should be taken during the first or second quarter of the student's enrollment and is designed both to judge the student's fitness to pursue doctoral work and to guide his advisory committee in planning his program. The qualifying examination may be retaken only once.

F. At the completion of his course work and other examinations, the doctoral student is required to take a written and/or oral comprehensive examination in his major and minor field. If a student does unsatisfactory work on the comprehensive examination, he may be granted a second examination at the next regularly scheduled time, or later. His committee will recommend the conditions to be met before the examination may be repeated. The comprehensive examination may be retaken only once.

G. After the dissertation has been accepted and after all required course work has been completed, but at least four weeks before the candidate is scheduled to receive his degree, a final oral examination on the dissertation and related fields will be conducted by the student's advisory committee and any other faculty members designated by the Graduate Dean. The examination will be open to any member of the graduate faculty.

VIII. The Dissertation:

The dissertation topic must be approved by the student's major professor and advisory committee and must be an original contribution to knowledge in the chosen field.

A separate bulletin outlining University requirements concerning the preparation of dissertations is available in the Graduate Office.

The student should register for 798 – **Dissertation** – during the quarter in which defends his dissertation.

IX. Documents:

The doctoral student must file a number of documents with the Graduate Office.

A. After his doctoral committee has been appointed and his qualifying examination completed but before he has passed thirty-six (36) hours of doctoral course work, he should prepare in conjunction with his adviser a "Doctoral Planning Sheet," one copy of which is to go to each member of his committee and two copies to the Graduate Office.

B. After the student has completed all the requirements for the doctoral degree other than the dissertation but at least two quarters prior to graduation he should file two copies of the "Application for Candidacy" form with the Graduate Office and one copy with his adviser.

C. The student should present three copies of the "Application for Degree" form, properly stamped by the Business Office, to the Graduate Office during the quarter preceding that of graduation.

D. When completed, the student's file in the Graduate Office should contain in addition to the three documents described above statements from his adviser and/or department chairman appointing his doctoral committee, approving his dissertation prospectus, acknowledging the receipt of a first draft of his dissertation, and verifying the successful completion of his qualifying and comprehensive examinations and dissertation defense. Also contained in his file should be statements of proficiency in language and/or statistics.

PART FIVE

DEPARTMENTAL REQUIREMENTS AND DESCRIPTIONS OF COURSES

COLLEGE OF EDUCATION AND PSYCHOLOGY

COLLEGE OF LIBERAL ARTS

COLLEGE OF SCIENCE

SCHOOL OF BUSINESS ADMINISTRATION

SCHOOL OF FINE ARTS

SCHOOL OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

SCHOOL OF HOME ECONOMICS

COLLEGE OF EDUCATION AND PSYCHOLOGY

Eric M. Gunn, Dean

Walter E. Cooper, Assistant Dean

Herman Boroughs, Coordinator of Graduate Studies

Requirements for Admission to Graduate Programs

Admission to the Graduate School for study in the College of Education and Psychology requires a specific grade point average and a minimum GRE score. (See general admission requirements in Part III of this **Bulletin.**) Any individual who does not meet the general admission requirements may request additional consideration of his application by appealing to the appropriate department chairman. He may be admitted to a graduate program if he receives the approval of the department chairman, the Dean of the College of Education and Psychology, and the Dean of the Graduate School.

Anyone holding a bachelor's degree from an accredited institution may be admitted as a special graduate student. A special graduate student is not considered to be in a graduate program leading to a degree. If the student demonstrates proficiency in graduate work, he may make application for a graduate degree program and, if approved, the student may use up to sixteen (16) quarter hours of work taken as a special graduate student in the degree program.

Those applicants who wish to study for a master's degree in any area of professional public school work should study for the Master of Education degree, and, therefore, must first hold or qualify to hold a Class A teaching certificate based on a baccalaureate degree in the area in which they wish to concentrate. A Master of Education degree applicant who does not yet qualify for an A certificate may be admitted to the Graduate School, but must meet the requirements of the State of Mississippi for an A certificate in teaching before the degree will be awarded. However, upon the recommendation of the departmental chairman, the Dean of the College of Education and Psychology may waive the requirement of satisfying certification requirements for those students currently employed or preparing for employment in junior or senior colleges, non-public institutions, or positions not requiring certification. In the event that certification requirements are waived, it is incumbent upon the student to recognize this limitation upon the scope of the areas within which he might seek employment in the future.

Degree and Specialist Programs Offered

The College of Education and Psychology offers graduate programs at three levels: master's degree; specialist certificate; and doctor's degree.

Master's Degrees: Master's degrees are offered in the following departments, with majors as indicated:

Department of Business Education
- Master of Science
- Master of Education

Department of Curriculum and Instruction
- Master of Education in
  - Elementary Education
  - Early Childhood Education
  - Secondary Education
- Master of Science in
  - Reading
  - Secondary Education

Department of Educational Administration and Supervision
- Master of Education in
  - Educational Administration
  - Supervision of Instruction

Department of Guidance
- Master of Education in School Counseling
- Master of Science in
  - College Counseling
  - Community Counseling

Department of Industrial and Technical Education
- Master of Science

Department of Library Science
- Master of Arts
- Master of Science

Department of Psychology (Including Educational Psychology)
- Master of Arts
- Master of Science

Department of Science Education
- Master of Science
- Master of Education

Department of Special Education
- Master of Education

Specialist Certificates: Specialist certificates are offered in the following departments, with majors as indicated:

Department of Business Education
- Specialist Certificate in Business Education

Department of Curriculum and Instruction
- Specialist Certificate in Elementary Education
- Specialist Certificate with Emphasis in Reading
- Specialist Certificate in Secondary Education

Department of Educational Administration and Supervision
- General Administration
- Secondary School Administration
- Elementary School Administration
- Curriculum and Supervision

Department of Guidance
- Specialist Certificate in School Counseling

Doctoral Degrees: The following departments offer the Doctor of Education and/or the Doctor of Philosophy degrees:

Department of Curriculum and Instruction
- Elementary Education
- Secondary Education

Department of Educational Administration and Supervision

Department of Guidance

Department of Psychology
- Psychology
- Clinical Psychology
- Educational Psychology

Department of Science Education

Department of Special Education

DEPARTMENT OF BUSINESS EDUCATION (BED – 105)

Annelle Bonner, Chairman

Baldwin G. Taylor

The Department of Business Education offers programs of study leading to the Master of Science degree in business education, the Master of Education degree in business education, certification in cooperative office education, and an Education Specialist Certificate in business education. Persons who plan to teach business subjects in junior and senior colleges, who desire Class AA certification in secondary education, who desire certification in cooperative office education, or who desire additional training for employment in the business world can find a program suited to their professional goals. A person pursuing any one of these programs should have completed an undergraduate major in business teacher education. Candidates not having completed this major must become eligible for Class A certification as a business teacher as a prerequisite to the completion of all requirements for the first three programs listed. To be eligible for admission to the Education Specialist Certificate

program, a person must present evidence of satisfactory scholarship in undergraduate and graduate study, hold a master's degree with a major in business education, have a well-defined professional goal, and meet other admission requirements of the University.

The appropriate master's degree will be conferred upon candidates who (1) meet the general requirements of the Graduate School and of the Department of Curriculum and Instruction; (2) complete the special curriculum requirements outlined below; and (3) pass an oral examination. In addition a comprehensive written examination covering course content may be required by the Department of Business Education. A thesis is optional.

The Education Specialist Certificate will be conferred upon candidates who satisfactorily complete items (1) and (2) in the preceding paragraph, (3) pass oral and written examinations, and (4) complete a research problem.

MASTER OF SCIENCE DEGREE PROGRAM

Curriculum Requirements

	Hours
FIN 540—Managing Financial Institutions	4
FIN 585—The Business Environment	4
*Electives in School of Business Administration	16
RED 501—Research: Its Introduction and Methodology	4
CIF 504—Foundations in American Education	4
BED 551—Principles of Business Education	4
BED 552—Seminar in Business Education	4
Electives or thesis	6
	46

MASTER OF EDUCATION DEGREE PROGRAM

Curriculum Requirements

	Hours
EDUCATION: 12 quarter hours	
RED 501—Research: Its Introduction and Methodology	4
CIF 504—Foundations in American Education	4
EPY 510—Advanced Educational Psychology	4
BUSINESS ADMINISTRATION: 12 quarter hours	
ECO G-470—Comparative Economic Systems	4
MGT 525—Human Relations in Business	4
Elective	4
BUSINESS EDUCATION: 22 quarter hours	
BED 508—Curriculums in Business Education	4
BED 551—Principles of Business Education	4
BED 552—Seminar in Business Education	4
BED 569—Measurement and Evaluation in Business Education	4
Electives or thesis	6
	46

*Electives are to be chosen in consultation with the chairman of the department.

It is recommended that RED 501, the research course, be taken early in each program.

CURRICULUM FOR COORDINATORS OF BUSINESS AND OFFICE EDUCATION PROGRAMS

Persons who hold a Bachelor of Science degree with a major in business teacher education may take the three courses listed below and become certified as coordinators of business and office education programs.

	Hours
BED G-452–Philosophy of Vocational Business Education	4
BED G-453–Coordination of Office Occupations Programs	4
BED 591–Problems in Cooperative Office Education	2

EDUCATION SPECIALIST CERTIFICATE

Curriculum Requirements

As part of the requirements for the Specialist Certificate with a major in business education, a student must maintain satisfactory scholarship in completing the following course work:

1.	**Required courses in basic education or equivalent**	20 hours
	Select five:	
a.	RED 501–Research: Its Introduction and Methodology	4 hours
b.	CIF 504–Foundations in American Education	4 hours
c.	GED 506–Foundations in Guidance	4 hours
d.	CIF 507–Basic Course in Curriculum Development	4 hours
e.	EPY 510–Educational Psychology	4 hours
f.	CIF 532–Measuring Results in Education	4 hours
2.	**Area Major** (specialization in business education)	28 hours
a.	BED 504–Foundations in Business Education	4 hours
b.	BED 551–Principles of Business Education	4 hours
c.	Select two:	
	BED 553–Improvement of Instruction in Bookkeeping and Related Basic Skills	4 hours
	BED 555–Improvement of Instruction in Typewriting and Related Skills	4 hours
	BED 556–Improvement of Instruction in Shorthand and Transcription	4 hours
d.	BED 601–Seminar in Business Education	4 hours
e.	BED 660–Administration and Supervision in Business Education	4 hours
f.	BED 698–Research Problem	4 hours

3. **Related Field** 20 hours.
The related field selected should both complement and supplement the major area in rounding out the preparation for one of the career goals of the specialist program, i.e., (a) advanced technical education for business; (b) teacher education; or (c) administration and supervision. Course credits earned in the basic courses in education are not applicable to the related field.

With the approval of the candidate's advisory committee, a related field may be selected from one of the following: (a) school administration; (b) guidance; (c) educational psychology; (d) vocational education; (e) techniques (research, statistics, and tests and measurements); (f) secondary education.

Also with the approval of the candidate's advisory committee, a combination of courses selected primarily from the foregoing fields may constitute a related field provided such selection contributes directly to the career goal of the candidate.

4. **Outside minor** - field other than education 16 hours.
A candidate pursuing the Education Specialist Certificate with a major in business education pursues an outside minor in business administration and/or economics.

5. **Elective courses** (ten (10) quarter hours provided minimum hours are taken in the basic, major, related, and minor areas) 0-10 hours.
Electives should be selected with approval of adviser to strengthen the candidate's preparation for his chosen career goal.

Scholarship and Examinations

In addition to achieving acceptable scores on admission examinations and maintaining satisfactory scholarship through the course work, a candidate will be required to achieve satisfactorily in both written and oral comprehensive examinations in business education.

Completion of Work for Certificate

A candidate must complete the requirements for the Specialist Certificate within six years from the date of admission to candidacy.

COURSE DESCRIPTIONS (BED – 105)

G-452–**Philosophy of Vocational Business Education.** Four hours.

History of vocational business education; changing concepts resulting from Federal legislation; changing nature of office systems and occupations; changing employment opportunities and consequent changes in procedures and techniques of vocational business education.

G-453—**Coordination of Office Occupations Programs.** Four hours.

Problems of the coordinator in the development of programs to meet the needs of employed youth and adults in office occupations programs.

G-460—**Office Management.** Four hours.

A study of the principles of management as applied to office work, covering office organization, supervision, layout, supplies, machines, personnel, office forms and reports, and office services.

504—**Foundations in Business Education.** Four hours.

Examination and analysis of the history and philosophy of business education.

508—**Curriculums in Business Education.** Four hours.

Curriculum construction; content organization; selection and preparation of instructional materials; and application of instructional techniques.

551—**Principles of Business Education.** Four hours.

Principles and objectives of business education in junior high school, high school, and junior college and other post high school institutions; guidance; qualifications and professional activities of the business teacher; and public relations with business.

552—**Seminar in Business Education.** Four hours.

An intensive study of specific problems in business education, and a survey of literature pertaining to the problems.

553—**Improvement of Instruction in Bookkeeping and Related Basic Skills.** Four hours.

Problems and procedures in the mastery of bookkeeping and related knowledges and skills; materials and teaching procedures in bookkeeping and business mathematics; teaching problems emphasized; significant research relating to methodology and testing examined.

555—**Improvement of Instruction in Typewriting and Related Skills.** Four hours.

Teaching procedures basic to vocational proficiency in typewriting and related skills; available instructional materials; measurement of skills; standards of achievement; teaching problems of students in class; review of related research.

556—**Improvement of Instruction in Shorthand and Transcription.** Four hours.

Problems in the development of occupational proficiency in shorthand; available instructional materials; transcription problems; integration of short-

hand, typewriting, English, and style; achievement tests; standards of achievement. Special attention to teaching problems of students in the class. Evaluation of related literature and research.

569—**Measurement and Evaluation in Business Education.** Four hours.

Concept of evaluation; tools of evaluation; evaluation in the different business subjects; construction of tests; selection, administration, and scoring of tests; determination of grades; evaluation on the job (National Business Entrance Tests, Civil Service, et cetera).

591—**Problems in Cooperative Office Education.** Two hours.

Analysis of problems in administering cooperative office education programs.

592—**Special Problems I, II, III.** One hour each.

Prerequisite. 12 quarter hours of advanced courses in business education.

A problem study to be approved by the department chairman to develop knowledge and facility in a field of interest of the student. Preparation of a scholarly paper is required.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit is deferred until thesis is completed.

601—**Seminar in Business Education.** Four hours.

Analysis and evaluation of significant research studies in the field of business education.

660—**Administration and Supervision of Business Education.** Four hours.

Study of the principles, agencies, and general techniques of effective administration and supervision of business education in junior high, senior high, and evening high schools, and in colleges.

691—**Research in Business Education.** One to twelve hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other Univeristy facilities must enroll in this course.

698—**Research Problem.** Four hours.

DEPARTMENT OF CURRICULUM AND INSTRUCTION

Paul W. Peddicord, Chairman

Leo R. Miller, Co-Chairman Graduate Teacher Education
Bonnie J. Davis, Co-Chairman Undergraduate Teacher Education

Brevard Campbell Cunningham Friedman D. Knight
Landskov McNinch L. Posey Rains Wall

The Department of Curriculum and Instruction includes the areas of elementary education, early childhood education, reading, and secondary education. The Department offers programs at the master's, specialist, and doctoral levels in these areas. The following degrees are offered:

Master of Education in Elementary Education

Master of Education in Early Childhood Education

Master of Science in Reading

Master of Education and Master of Science in Secondary Education

Specialist Certificate in Elementary Education

Specialist Certificate in Elementary Education with Emphasis in Early Childhood Education

Specialist Certificate in Elementary Education with Emphasis in Reading

Specialist Certificate in Secondary Education

Doctor of Education and Doctor of Philosophy in Elementary Education

Doctor of Education and Doctor of Philosophy in Elementary Education with Emphasis in Early Childhood Education

Doctor of Education and Doctor of Philosophy in Elementary Education with Emphasis in Reading

Doctor of Education and Doctor of Philosophy in Secondary Education

Only candidates holding a Class A certificate, or who exhibit willingness to meet Class A certification requirements at the undergraduate level prior to completion of a graduate degree program, will be admitted to the Department of Curriculum and Instruction. However, upon the recommendation of the departmental chairman, the certification requirement may be waived for a student pursuing a graduate degree in the area of secondary education who is currently employed or preparing for employment in a junior or senior college, non-public institution, or for a position not requiring certification. In the event the certification requirement is waived, it is incumbent upon the student to recognize this limitation upon the scope of the areas within which he might seek employment in the future.

The Department of Curriculum and Instruction strongly recommends that a student gain teaching experience before completing the latter two-thirds of his master's degree program. No student will be eligible to receive a specialist certificate until he has completed at least one year of teaching experience. Three years of teaching experience is a requisite for a doctor's degree.

MASTER'S DEGREES

The Department of Curriculum and Instruction offers master's degrees in elementary education, early childhood education, reading, and secondary education.

The program of study at the master's degree level is designed to increase the professional competency of the classroom teacher and to provide the course work necessary to meet standards of teacher certification at this advanced level.

The master's program requires regular admittance procedures, appointment of a graduate adviser, the filing of an approved program of studies, satisfactory completion of the English Proficiency Test, and successful completion of the comprehensive examination.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a master's degree program, an applicant must have a grade point average of at least 2.75 (figured on an A equals 4.0 scale) for the last two years of undergraduate study and at least 3.0 on undergraduate courses in the area of proposed graduate study. In addition, the applicant must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examinations.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a master's degree program on a conditional basis in one of two ways.

1. He must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examinations and must have a grade point average no lower than 2.5.

2. He must have a grade point average of at least 2.75 if he has scored lower than 750 on the aptitude sections of the Graduate Record Examinations.

DEGREE PROGRAMS

Master of Education Degree in Elementary Education

RED 501–Research: Its Introduction and Methodology. Four hours.
CIF 504–Foundations in American Education. Four hours.

CIE 506–Psychology of Reading. Four hours.
or
CIE 529–Reading in the Elementary School. Four hours.
AED 520–Basic Course in Educational Administration. Four hours.
CIE 528–Curriculum Problems in the Elementary School. Four hours.
CIF 532–Measuring Results in Education. Four hours.
EPY 574–Advanced Child Psychology. Four hours.
CIE 598–Thesis. Optional. Credit deferred until thesis is completed. Six hours.

In addition to the above required core courses, at least three courses (12 hours) must be chosen from the following:

SCE 510–Physics for Elementary School Teachers. Four hours.
SCE 511–Chemistry for Elementary School Teachers. Four hours.
SCE 512–Biology for Elementary School Teachers. Four hours.
SCE 513–Earth Sciences for Elementary School Teachers. Four hours.
CIE 524–Problems of Teaching Arithmetic. Four hours.
CIE 525–Social Studies Education in Elementary School. Four hours.
CIF 560–Economic Education for Teachers. Four hours.

Total Hours–40 non-thesis program; 46 thesis program.
Free Electives–8 hours non-thesis program

Master of Education Degree in Early Childhood Education

RED 501–Research: Its Introduction and Methodology. Four hours.
CIF 504–Foundations in American Education. Four hours.
CIE 570–Practicum in Early Childhood Education. Four hours.
CIE 572–Practicum with Parents. Four hours.
CIE 577–Evaluation in Early Childhood Education. Four hours.
CIE 578–Creative and Mental Growth. Four hours.
CIE 576–Seminar in Early Childhood Education. Four hours.
or
CIE 580–Research in Child Development. Four hours.
CIE 598–Thesis. Optional. Credit deferred until thesis is completed. Six hours.

In addition to the above required core courses, at least two courses (8 hours) must be chosen from the following:

CIE 506–Psychology of Reading. Four hours.
or
CIE 529–Reading in the Elementary School. Four hours.
CIE 528–Curriculum Problems in the Elementary School. Four hours.
EPY 574–Advanced Child Psychology. Four hours.

Total Hours–36 non-thesis program; 42 thesis program
Free Electives–12 hours non-thesis program; 4 hours thesis program

Master of Science Degree in Reading

RED 501–Research: Its Introduction and Methodology. Four hours.

CIF 504–Foundations in American Education. Four hours.
PSY 588–Individual Psychological Testing: Wechsler Scales. Four hours.
CIE 506–Psychology of Reading. Four hours.
CIE 529–Reading in the Elementary School. Four hours.
CIS 554–Reading in the Secondary School. Four hours.
CIE 513–Advanced Diagnosis and Remendiation of Reading Disability for the Classroom Teacher. Four hours.
CIE 533–Practicum in Diagnosis and Remediation of Reading Disability for the Classroom Teacher. Four hours.
SPE–G-455–Speech and Hearing Problems for the Classroom Teacher. Four hours.
AED 542–Supervision and Curriculum in Reading. Four hours.
CIE 598–Thesis. Optional. Credit deferred until thesis is completed. Six hours.

Total Hours–40 non-thesis program; 46 thesis program
Free Electives–8 hours non-thesis program

Master of Education Degree and

Master of Science Degree in Secondary Education

Plan I (Thesis Program–46 Hours)
RED 501–Research: Its Introduction and Methodology. Four hours.
CIF 504–Foundations in American Education. Four hours.
EPY 510–Advanced Educational Psychology. Four hours.
GED 506–Fundamentals of Guidance. Four hours.
or
CIS 508–High School Curriculum. Four hours.
or
CIF 532–Measuring Results in Education. Four hours.
CIS 598–Thesis. Credit deferred until thesis is completed. Six hours.

Plan II (Non-thesis Program–48 Hours)
RED 501–Research: Its Introduction and Methodology. Four hours.
CIF 504–Foundations in American Education. Four hours.
GED 506–Fundamentals of Guidance. Four hours.
CIS 508–High School Curriculum. Four hours.
EPY 510–Advanced Educational Psychology. Four hours.
CIF 532–Measuring Results in Education. Four hours.

In addition to the above twenty-two (22) hour core requirement for Plan I and the twenty-four (24) hour core requirement for Plan II, a minor of at least twenty-four (24) hours must be taken in one of the following subject areas:

Art
Biology
Chemistry
Physics
Communication
Theatre Arts
Geology
Technical and Industrial Education

English	*Mathematics
Foreign Languages	**Science
Music	***Social Studies

*Courses in computer science and statistics may be included in this area.
**A combination of science courses may be used if the adviser determines that the need exists.
***Courses may be taken in any one or a combination of the following areas: history, geography, political science, sociology, and economics.

Under certain conditions, other minors may be selected with the approval of the department chairman.

SPECIALIST CERTIFICATES

The Department of Curriculum and Instruction offers specialist certificates in elementary education, secondary education, elementary education with emphasis in reading, and elementary education with emphasis in early childhood education. As a sixth year program, the specialist program requires regular admittance procedures, appointment of a graduate adviser and committee, filing an approved program of studies, satisfactory completion of the English Proficiency Test, and completion of an approved field study.

Course work within the specialist programs includes the requirements outlined under the master's degree programs in addition to the requirements specified in this section.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a specialist program, an applicant must have a grade point average no lower than 3.25 on previous graduate work and a combined score of at least 800 on the aptitude sections of the Graduate Record Examinations.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a specialist program on a conditional basis in one of two ways.

1. He must make a combined score of at least 800 on the aptitude sections of the Graduate Record Examinations and must have a grade point average no lower than 3.00 on previous graduate work.

2. He must have a grade point average no lower than 3.25 on previous graduate work and must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examinations.

Specialist Certificate in Elementary Education

RED 502–Introduction to Educational Statistics. Four hours.
CIF 716–History of Public Education in the United States. Four hours.
CIF 718–Comparative Philosophies of Education. Four hours.

AED 526–Supervision of Instruction. Four hours.
EPY 503–Learning and Motivation I. Four hours.
or
EPY 510–Advanced Educational Psychology. Four hours.
CIE 698–Research Problem. Four hours.

Total Hours–24

In addition to the above required core courses, at least four courses (16 hours) must be taken in a subject field or fields.
Total Required Hours–40 minimum
Electives–8 hours

Specialist Certificate in Elementary Education

With Emphasis in Early Childhood Education

RED 502–Introduction to Educational Statistics. Four hours.
CIF 716–History of Public Education in the United States. Four hours.
CIF 718–Comparative Philosophies of Education. Four hours.
AED 526–Supervision of Instruction. Four hours.
EPY 503–Learning and Motivation I. Four hours.
or
EPY 510–Advanced Educational Psychology. Four hours.
CIE 698–Research Problem. Four hours.

Total Hours–24

In addition to the above required core courses, at least four courses (16 hours) will be taken in the area of early childhood education.
Total Required Hours–40 minimum
Electives–8 hours

Specialist Certificate in Elementary Education

with Emphasis in Reading

RED 502–Introduction to Educational Statistics. Four hours.
CIF 716–History of Public Education in the United States. Four hours.
CIF 718–Comparative Philosophies of Education. Four hours.
AED 526–Supervision of Instruction. Four hours.
EPY 503–Learning and Motivation I. Four hours.
or
EPY 510–Advanced Educational Psychology. Four hours.
CIE 698–Research Problem. Four hours.

Total Hours–24

In addition to the above required core courses, at least four courses (16 hours) will be taken in the area of reading.
Total Required Hours–40 minimum
Electives–8 hours

Specialist Certificate in Secondary Education

RED 502–Introduction to Educational Statistics. Four hours.
CIF 716–History of Public Education in the United States. Four hours.
CIF 718–Comparative Philosophies of Education. Four hours.
EPY 575–Advanced Adolescent Psychology. Four hours.
AED 704–School Community Relations. Four hours.
or
AED 526–Supervision of Instruction. Four hours.
CIS 698–Research Problem. Four hours.

In addition to the above twenty-four (24) hour core requirement, a minor of at least twenty-four (24) hours must be taken in one of the subject areas listed under the heading **Master of Education Degree and Master of Science Degree in Secondary Education.**

Total Required Hours–48 minimum

DOCTORAL DEGREES

The Department of Curriculum and Instruction offers the Doctor of Education and the Doctor of Philosophy degrees in elementary education, secondary education, elementary education with emphasis in reading, and elementary education with emphasis in early childhood education. If a student desires to receive a Doctor of Philosophy degree he should follow one of the programs outlined in this section and, in addition, gain proficiency in one foreign language.

There are three distinct phases through which all students proceed in pursuit of the doctoral program. These include:

1. Phase One–involvement in procedures relative to general admittance requirements; appointment of a major professor; successful completion of the Miller Analogies, English Proficiency, and qualifying examinations; and appointment of the candidate's doctoral committee.

2. Phase Two–involvement in procedures relative to tentative program of studies, acceptance of prospectus, successful completion of the language and/or statistics requirements, completion of the residency and course work requirements, successful completion of the comprehensive examination, and admission to candidacy for a doctoral degree.

3. Phase Three–involvement in procedures relative to approval of dissertation.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a doctoral program, an applicant must have a grade point average no lower than 3.5 on previous graduate work and a combined score of at least 900 on the aptitude sections of the Graduate Record Examinations.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a doctoral program on a conditional basis in one of two ways.

1. He must make a combined score of at least 900 on the aptitude sections of the Graduate Record Examinations and must have a grade point average no lower than 3.25 on previous graduate work.

2. He must have a grade point average no lower than 3.5 on previous graduate work and must make a combined score of at least 850 on the aptitude sections of the Graduate Record Examinations.

DEGREE PROGRAMS

Doctor of Education Degree in Elementary Education

RED 552—Educational Research: Descriptive Statistical Methods. Four hours.
RED 553—Educational Research: Significance Tests and Research Design. Four hours.
RED 796—Advanced Educational Research. Four hours.
CIF 716—History of Public Education in the United States. Four hours.
CIF 718—Comparative Philosophies of Education. Four hours.
EPY 503—Learning and Motivation I. Four hours.
or
EPY 510—Advanced Educational Psychology. Four hours.
AED 526—Supervision of Instruction. Four hours.
CIE 762—Seminar in Elementary Education. Four hours.
CIE 797—Independent Study and Research. Hours arranged.
Not to be counted as credit toward a degree.
CIE 798—Dissertation.

In addition to the above thirty-two (32) hour core requirement, at least sixteen (16) hours must be earned in a subject field or fields and a minimum of twelve (12) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Elementary Education with Emphasis in Early Childhood Education

RED 552—Educational Research: Descriptive Statistical Methods. Four hours.
RED 553—Educational Research: Significance Tests and Research Design. Four hours.
RED 796—Advanced Educational Research. Four hours.

CIF 716–History of Public Education in the United States. Four hours.
CIF 718–Comparative Philosophies of Education. Four hours.
EPY 503–Learning and Motivation I. Four hours.
or
EPY 510–Advanced Educational Psychology. Four hours.
AED 526–Supervision of Instruction. Four hours.
CIE 762–Seminar in Elementary Education. Four hours.
CIE 797–Independent Study and Research. Hours arranged.
Not to be counted as credit toward a degree.
CIE 798–Dissertation.

In addition to the above thirty-two (32) hour core requirement, at least sixteen (16) hours must be earned in the area of early childhood education and a minimum of twelve (12) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Elementary Education

with Emphasis in Reading

RED 552–Educational Research: Descriptive Statistical Methods. Four hours.
RED 553–Educational Research: Significance Tests and Research Design. Four hours.
RED 796–Advanced Educational Research. Four hours.
CIF 716–History of Public Education in the United States. Four hours.
CIF 718–Comparative Philosophies of Education. Four hours.
EPY 503–Learning and Motivation I. Four hours.
or
EPY 510–Advanced Educational Psychology. Four hours.
AED 526–Supervision of Instruction. Four hours.
CIE 762–Seminar in Elementary Education. Four hours.
CIE 797–Independent Study and Research. Hours arranged.
Not to be counted as credit toward a degree.
CIE 798–Dissertation.

In addition to the above thirty-two (32) hour core requirement, at least twenty-eight (28) hours must be earned in the area of reading and a minimum of twelve (12) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Secondary Education

RED 552—Educational Research: Descriptive Statistical Methods. Four hours.
RED 553—Educational Research: Significance Tests and Research Design. Four hours.
RED 796—Advanced Educational Research. Four hours.
CIF 716—History of Public Education in the United States. Four hours.
CIF 718—Comparative Philosophies of Education. Four hours.
EPY 575—Advanced Adolescent Psychology. Four hours.
AED 704—School Community Relations. Four hours.
or
AED 526—Supervision of Instruction. Four hours.
CIS 797—Independent Study and Research. Hours arranged.
Not to be counted as credit toward a degree.
CIS 798—Dissertation.

The courses listed above will serve as a core program for students pursuing the doctoral degree in secondary education. The doctoral program consists of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation. Of the total number of hours required of a doctoral student in secondary education, approximately one half (½) must be taken in one of the subject areas listed under the heading **Master of Education Degree and Master of Science Degree in Secondary Education.**

ELEMENTARY EDUCATION COURSES (CIE – 115)

G-403—Kindergarten-Primary Education. Four hours.

A study of the contributions which group living makes to the mental and physical health of young children, with emphasis upon child development research in curricular experiences and records. Designed to help teacher and parents understand the readiness program. Laboratory is included.

G-412—Diagnosis and Remediation of Reading Disability for the Classroom Teacher. Four hours.

This course deals with the need for corrective and remedial reading in the school; nature and causes of reading disability; procedure in making a classroom diagnosis, including interpretation of results; remedial treatment of reading difficulities to include techniques and materials; and some opportunity for testing and remedial teaching in the public schools.

G-490—Workshop in Aviation Education. Four hours.

A course designed to familiarize teachers, principals, and superintendents with developments and trends in aviation and aerospace exploration and with the implications of those developments on our social, economic, and political life. May be taken twice for a total credit of eight (8) hours.

G-491—**The Reading Conference I, II.** One hour each.

An intensive program for three days during the Summer Quarter consisting of lectures, group discussions, and demonstration lessons.

505—**Modern Concepts in Reading Skill Development.** Four hours.

This course makes an intensive study of the skills required in reading, up-to-date methods and materials required to teach these skills, and classroom techniques for evaluating proficiency in the development of these skills. This course provides an understanding in depth of reading for the experienced teacher and in-service training groups.

506—**Psychology of Reading.** Four hours.

This course deals with (1) the nature of reading, (2) reading as a perceptual process, (3) learning principles and the reading process, (4) motivation and reading interest, (5) personality factors in the reading process, and (6) readability.

513—**Advanced Diagnosis and Remediation of Reading Disability for the Classroom Teacher.** Four hours.

Prerequisite: CIE 506.

A course dealing with the need for corrective and remedial reading in the school; the nature and causes of reading disability; procedure in making a classroom diagnosis; disability analysis interpretation; classroom remedial treatment of reading difficulty to include techniques and materials.

515—**Diagnosis and Remediation of Reading Disability for the Reading Clinician or Reading Specialist.** Four hours.

Prerequisite: CIE 506.

This course deals through lecture, discussion, demonstration, and observation with: (1) the role of the reading clinician or specialist in current society; (2) reading clinic organization; (3) the nature and causes of reading disability; (4) procedure and tools used in making a diagnosis in the clinical setting; (5) disability and analysis interpretation; (6) remedial instruction in the clinic of reading disability including techniques and materials; (7) a limited requirement to be met in testing and teaching observation in clinic.

517—**Professional Relationship in Improved Elementary Programs.** Four hours.

A course designed to investigate behavioral factors of individuals and groups as they affect and improve elementary school environment. Concepts and techniques of elementary teacher behavior will be investigated in detail and in theory and practice.

521—**Practicum in Remedial Reading.** Four hours.

Prerequisite: CIE 515.

Methods and Materials. The course provides an opportunity to learn methods and materials useful in remedial instruction through laboratory experience with children with remedial reading difficulties. Course meets twice a week for discussion with four laboratory periods arranged.

524—**Problems of Teaching Arithmetic.** Four hours.

Prerequisite: MAT 318 or consent of instructor.

A study of techniques, particularly those related to number concept, or teaching arithmetic; an examination of research studies and of current practices used in teaching at the elementary school level.

525—**Social Studies Education in Elementary School.** Four hours.

Programs, practices, trends, and investigations of special problems; criteria for evaluating, planning, organizing and improving social studies programs.

526—**The Development of the Latin American Countries.** Four hours.

Consideration is given to the historical development of the region, the land, origin of the people, race mixture, population movements, and natural resources. Further consideration is given to the political, social and economic development of the region.

528—**Curriculum Problems in the Elementary School.** Four hours.

A course involving analysis of elements of the curriculum. Emphasis is placed upon the implications of social life and the nature of the individual for curriculum development. Evaluates various curriculum procedures in terms of the implications.

529—**Reading in the Elementary School.** Four hours.

A course providing for extensive study of recent trends in materials and methods in reading in the elementary school including significant research studies which relate to these.

530—**Reading and Study Improvement Techniques for the Junior and Senior College Teacher of Reading.** Four hours.

A study of research, discussion of theory, and a practicum with current materials and methods will be utilized. Characteristics of students, evaluation techniques, organization, and administration of the total program will be included.

533—**Practicum in Diagnosis and Remediation of Reading Disability for the Classroom Teacher.** Four hours.

Prerequisite: CIE 515.

A course in which the student works with small groups of corrective reading cases, diagnosing needs, and teaching corrective lessons.

536—**Practicum in Reading Diagnosis.** Four hours.

Prerequisites: CIE 515 and PSY 588.

This course is to develop in the student the ability to make a complete reading diagnosis, interpret the results, make specific recommendations with regard to the diagnosis, and to be able to conduct a pre- and post- diagnosis parent interview.

537—**Practicum in Remedial Reading Instruction I.** Four hours.

This graduate course is to provide the student experience in interpertation of test results of reading disability cases, the selection of remedial materials, and teaching techniques which would be appropriate for different disabilities. The student will teach a remedial case and have experience in writing case progress reports.

537—**Practicum in Remedial Reading Instruction II.** Four hours.

This graduate course is an extension of the first practicum. The doctoral level student will need this additional experience.

570—**Practicum in Early Childhood Education.** Four hours.

A course of study concerned with the specific practices and research investigations relative to curriculum planning, administration, and supervision within early childhood laboratories. Observations and participation within the existing programs, including pupil contact and limited research activities, is required.

572—**Practicum with Parents.** Four hours.

An action research course dealing with specific techniques of counseling, intrapersonal relationship within family organization, parent-teacher interview techniques, parent-teacher organizations, and in-service counseling with parents of kindergarten and primary age pupils.

576—**Seminar in Early Childhood Education.** Four hours.

A study of general practice, theory, and research in the related fields of Early Childhood Education. The student will be involved with individuals and/or small groups of children in a practicum setting. The relatedness of the psychological, sociological, physiological and intellectual patterns and their impact upon child development will receive major attention. A scholarly report considering these factors mentioned above will be required.

577—**Evaluation in Early Childhood Education.** Four hours.

An introduction to specific principles and practices relative to group evaluative procedures with emphasis placed upon the developmental, diagnostic, and projective techniques, case study and standardized testing procedures within the early childhood education range.

578—**Creative and Mental Growth.** Four hours.

Research in the development of habits of creative thinking and its relation-

ship to mental growth. Involving art, music, drama, creative writing, and other behavior patterns. Research exercises required.

580—**Research in Child Development.** Four hours.

Research in child behavior, child psychology, maturity factors, laboratory-experimental studies, physiologic development, experimental methods of preception in children, interpersonal relationship, behavior among children, or family life variables.

582—**History and Philosophy of Early Childhood Education.** Four hours.

A course of study concerned with in-depth investigations of Pestalozzi, Froebel, Montessori, and others representing schools of thought influencing the curriculum and program of young children. Investigations into the social and cultural changes which have influenced and modified early childhood programs will be treated in detail.

592—**Special Problems I, II, III.** One hour each.

A problem study to be approved by the appropriate department head to develop knowledge and facility in a field of interest for the student which requires preparation of a scholarly paper under the supervision of a graduate professor.

594—**Field Problems in Production I, II.** Four hours.

Opportunity to study local school problems of curriculum revision, course of study construction, evaluation of methods, building projects, community surveys, testing programs, and record systems under careful supervision of a graduate professor.

The project must be approved by the departmental chairman upon the recommendation of the student's major professor.

596 I—**Research in Reading.** Four hours.

This course is to provide the student with an intensive review of research in reading. The student will develop a prospectus for a research project in reading.

596 II—**Research in Reading.** Four hours.

In this course the student in the specialist program carries out the research project which he formulated in CIE 596 I. The project will be written under the guidance of his major professor and will be presented as his field problem which is a requirement for the specialist certificate.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

604—**Reading for Different Cultural Groups.** Four hours.

This course will review the current research relating to the culturally different. Implications of these research findings will be drawn from the field of reading, relating specifically to the creation of appropriate materials and adapting methodology to these groups.

620—**Internship in Reading: Public School, Clinic, or Research.** Eight hours.

This is an instructional internship to prepare the individual to be able to assume a position in a public school as director or supervisor of reading instruction, or a position in a reading clinic. Since this is the capstone of the specialist program, an effort will be made to locate the student in the system where he will accept a position upon graduation. For those students going into research, an exchange program will also be set up with reading clinics and research groups in other states. In all three instances the student will work full time at his selected position, taking no other course work. There will be continuous evaluation of the student's progress during the internship between the University and the accepting agency.

662—**Research in Elementary Education.** Four hours.

Prerequisite: Advanced graduate status or permission of chairman of department.

A course designed to familiarize the student with the elements and methods of research, with the representative types of research, and with major contributions of research to the field of elementary education.

685—**Seminar in Reading Instruction.** Four hours.

Provides an intensive study in depth of facets of reading instruction.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problem.** Four hours.

Selection of practical educational problems for solution by candidates for education specialist certificate, using research and professional knowledge. A scholarly report is required.

762—**Seminar in Elementary Education.** Four hours.

Prerequisite: Advanced graduate status or permission of chairman of department.

An intensive examination into the issues relative to the elementary school program. This course will be interdisciplinary in nature and will focus upon contributions of research, philosophy, history, sociology, and educational psychology as it applies to the resolution of major issues in elementary education.

791—**Research in Elementary Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

SECONDARY EDUCATION COURSES (CIS — 120)

G-462—**Curriculum of the Secondary School.** Two hours.

A critical examination of the present day curriculum with emphasis upon the core curriculum.

G-464—**Student Activities in Secondary Schools.** Two hours.

Consideration is given to the general nature and organization of the program popularly known as extra-curricular activities. Major emphasis is upon the various activities that constitute an activity program in a modern high school.

501—**Algebra for Secondary Teachers.** Four hours.

A consideration of problems peculiar to the teaching of algebra and a review of special algebraic principles.

506—**Geometry for Secondary Teachers.** Four hours.

A consideration of problems peculiar to the teaching of high school geometry and a review of special geometric principles.

508—**High School Curriculum.** Four hours.

Various designs of the curriculum as they apply to general and specialized education, and a critical evaluation of content of subject matter areas in terms of the needs of youth.

523—**Research and Problems in Mathematics Education.** Four hours.

A seminar for experienced teachers who wish to plan developmental programs of instruction in light of recent investigation and research. Topics to be considered include teaching strategies, language and symbolism, programmed instruction, current research in mathematics education, and other topics of general interest.

554—**Reading in the Secondary Schools.** Four hours.

A course providing for extensive study of recent trends in materials and methods in reading in secondary school including significant research studies which relate to these.

592—**Special Problems I, II, III.** One hour each.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

600—**Seminar in Secondary Education.** Four hours.

An investigation of the major trends in the disciplinary areas of the curriculum with emphasis upon research findings within each area as related to how each contributes to the accomplishment of the objectives of the secondary school.

605—**Professional Subject Matter in Mathematics.** Four hours.

A study of ways to enrich teaching of high school mathematics by the introduction of elementary topics from college mathematics.

607—**Materials in the Teaching of Mathematics.** Four hours.

A study of materials to be used in the teaching of secondary mathematics for multi-sensory aids, mathematics clubs, evaluation, and applications.

608—**Mathematics for Junior High School Teachers.** Four hours.

Prerequisite: To be teaching junior high school mathematics or have at least a minor in college mathematics.

A consideration of problems peculiar to the teaching of mathematics in grades 7, 8, and 9, and the organization of mathematical subject matter for these grades.

609—**Advanced Professional Subject Matter in Mathematics.** Four hours.

Prerequisite: CIS 605.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problem.** Four hours. (For Specialist Certificate)

791—**Research in Secondary Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND SUPERVISION (AED -- 130)

James H. McPhail, Chairman

Anderson	Braun	Bedenbaugh
Carson	Lucas	Owings

The programs for the major in educational administration encompass the full range of administrative positions and lead to the master's degree, the specialist certificate, and the doctor's degree. Programs at the master's degree level provide preparation in the elementary school principalship, the junior high school principalship, the high school principalship, and supervision of instruction. Programs at the specialist certificate and doctorate levels provide preparation for the superintendency and central administrative staff positions. In addition, the program at the doctoral level provides preparation for college teachers of educational administration and persons desiring to prepare for administration in higher education.

The following course patterns for the different levels set forth only the minimum core requirements, and the electives selected to suit individual needs and objectives must be chosen with the advice and approval of the student's major professor. Therefore, it is mandatory that the student consult early in his program, and frequently thereafter, with his major professor concerning the selection of courses and sequence in which these courses will be taken.

DEPARTMENTAL POLICIES

The following departmental policies are supplementary to the rules and regulations of the University and the Graduate School as set forth elsewhere in this **Bulletin.**

PROGRAMS AND COURSES IN

EDUCATIONAL ADMINISTRATION

MASTER'S DEGREE

Admission

Regular: A minimum grade point average of 2.75 and a combined score of 750 on the aptitude phase of the Graduate Record Examinations.

Conditional: By departmental action provided the student has a score of 750 or above on the aptitude section of the Graduate Record Examinations and a grade point average no lower than 2.5 or a grade point average of 2.75 or above if the Graduate Record Examinations score is below 750.

Application for Graduation Graduation is based upon:

1. Satisfactory completion of the English Proficiency Test.
2. Completion of an approved program of studies consisting of a minimum of forty-six (46) quarter hours.
3. Satisfactory completion of the comprehensive examination.

PROGRAMS

Educational Administration

RED 501—**Research: Its Introduction and Methodology.** Four hours. (Initial enrollment in the program must be in this course)
CIF 504—**Foundations in American Education.** Four hours.
CIF 507—**Basic Course in Curriculum Development.** Four hours.
EPY 510—**Advanced Educational Psychology.** Four hours.
AED 520—**Basic Course in Educational Administration.** Four hours.
AED 526—**Supervision of Instruction.** Four hours.*
AED 550—**School Business Management.** Four hours.*
AED 598—**Thesis.** Six hours. Credit deferred until thesis is completed.**

Total—28 or 34 hours.

Electives—12 or 18 hours. Included among the elective courses must be one of the following as approved by the student's adviser:

AED 513—**Organization and Administration of the Junior High School.** Four hours.
AED 516—**Secondary School Administration.** Four hours.*
AED 518—**The Elementary School Principal.** Four hours.*

*Prerequisite: AED 520.

**Required only of student writing a thesis.

Supervision of Instruction

RED 501—**Research: Its Introduction and Methodology.** Four hours.
(Initial enrollment in the program must be in this course)
CIF 504—**Foundations in American Education.** Four hours.
CIF 507—**Basic Course in Curriculum Development.** Four hours.
EPY 510—**Advanced Educational Psychology.** Four hours.
AED 520—**Basic Course in Educational Administration.** Four hours.
AED 526—**Supervision of Instruction.** Four hours.*
AED 638—**Practicum in Supervision.** Four hours.**
AED 598—**Thesis.** Six hours. Credit deferred until thesis is completed.***

Total—28 to 34 hours.

Electives—12 or 18 hours. These courses will be chosen from the fields of curriculum and instruction subject to the approval of the student's major professor.

*Prerequisite: AED 520
**Prerequisite: AED 526
***Required only of students writing a thesis.

SPECIALIST CERTIFICATE

Admission

Regular: A minimum grade point average of 3.25 on previous graduate work and a combined score of 800 on the aptitude phase of the Graduate Record Examinations.

Conditional: A grade point average between 3.00 and 3.25 on previous graduate work and a Graduate Record Examinations score no lower than 800 or a grade point average no lower than 3.25 and a Graduate Record Examinations score between 750 and 800.

Admission to Candidacy

1. It is mandatory that the application for admission to candidacy be submitted upon the completion of twelve (12) to sixteen (16) quarter hours of course work at the University of Southern Mississippi.
2. Satisfactory completion of the English Proficiency Test.

Application for Graduation Graduation is based upon:

1. Completion of an approved program of studies as determined by the student's committee and which may consist of more than the minimum forty-eight (48) quarter hours of credit required for graduation.
2. Satisfactory completion of the comprehensive examination.
3. Successful defense of the research project.

PROGRAMS

The specialist certificate students must have completed all courses or their equivalent in the master's degree program. Those courses not taken must be completed but will not count as part of the specialist program. Additional electives are required for previously completed required courses.

A minimum of twelve (12) quarter hours in cognate areas is required in all of the specialist certificate programs. The Department defines cognate areas as those courses which broaden and complement the student's program which are outside the areas of professional education. These courses and other electives will be chosen with the approval of the student's major professor and additional hours may be required to satisfy deficiencies in the student's program.

Administration

AED 611, 636, 638, 668, 698, 700, 704, 706, 710
Total–36 hours
Electives–12 hours in cognate areas.

Secondary Administration

AED 611, 638, 698, 704, 708, 710, 718
Total–28 hours
Electives–20 hours with 12 in cognate areas

Elementary Administration

AED 611, 638, 698, 704, 710 – RED 502 – CIF 718
Total–28 hours
Electives–20 hours with 12 in cognate areas

Curriculum and Supervision*

AED 611, 638, 698, 708 – CIF 532, 718 – CIE 528 – CIS 508 – EPY 580 or 610
Total–36 hours
Electives–12 hours in cognate areas. AED 517 or CIF 519 is required as the first elective if any of the above courses have been completed prior to entering this program.

*AED 520 and 526, CIF 507, and EPY 510 are required prerequisites.

School Business Management*

AED 550, 668, 704, 706, 708, 710
Total–24 hours.
Electives–24 hours with 20 from business oriented courses.
Suggested courses are MGT 525, G-472, G-468 – ACC G-470 – RED 612 – FIN 540 – BED G-460.

*CIF 507, AED 520, and RED 501 are required prerequisites.

DOCTORAL DEGREE

Admission

Regular: A minimum grade point average of 3.50 on previous graduate work and a combined score of 900 on the aptitude phase of the Graduate Record Examinations.

Conditional: A grade point average between 3.25 and 3.50 on previous graduate work and a Graduate Record Examinations score no lower than 900 or a grade point average no lower than 3.50 and a Graduate Record Examinations score between 800 and 900.

Qualifying Entrance Examination

1. Must be taken prior to the completion of twenty-four (24) quarter hours of study within the department.
2. May not be taken prior to the receipt of satisfactory GRE scores, the results of the Millers Analogies Test, and satisfactory completion of the English Proficiency Test.
3. Regularly admitted doctoral students who fail the examination may repeat it upon the completion of twenty-four (24) quarter hours of credit after the quarter in which the examination was taken.
4. The results of a master's degree comprehensive examination may not be substituted for this examination.

Planning Sheet Planning sheets are completed after the qualifying examination has been passed and the committee appointed, but before the student has completed thirty-six (36) hours of course work.

Admission to Candidacy Admission to candidacy should be submitted two quarters prior to graduation and will be approved by the student's graduate committee upon:

1. Completion of an approved program of studies.
2. Satisfaction of the language or statistics requirement.
3. Completion of an approved dissertation prospectus.
4. Completion of the comprehensive examination.
5. Completion of the residence requirement, which consists of three consecutive quarters of full-time studies.

Application for Graduation Graduation is based upon:

1. Meeting the departmental and Graduate School deadlines for receiving completed dissertation.
2. Successful defense of the completed dissertation.

PROGRAMS

At the doctoral level, programs are provided in (1) Public School Administration and (2) Educational Administration with an emphasis in Higher Education. The general administration program provides preparation for the superintendent, other central office positions, and college teachers while the program emphasizing higher education is designed to prepare administrators of higher education.

The doctoral program requires a minimum of 118 quarter hours beyond the bachelor's degree exclusive of the dissertation and proficiency in statistics. A minimum of forty-eight (48) quarter hours must be taken on the Hattiesburg campus. The student's doctoral committee, appointed by the Graduate Dean, will approve the selection of required courses and electives and in order to secure breadth and depth in the student's preparation program may require more than the minimum number of hours. The student's program shall include a minimum of twelve (12) quarter hours of graduate credit in cognate areas, preferably in the social sciences. The Department defines cognate areas as those courses which broaden and complement the student's program which are outside the areas of professional education.

Each doctoral student will be required to participate in a variety of laboratory and field experiences, many of which may not be connected with specific courses.

COURSE DESCRIPTIONS (AED – 130)

513—**Organization and Administration of the Junior High School.** Four hours.

The philosophy, functions, and curriculum and their implementation in the organization and administration of the junior high school program.

516—**Secondary School Administration.** Four hours.

The practical problems encountered by high school principals: scheduling, calendar, attendance, discipline, office management, records and reports, activities, selection and supervision of staff; the principal's professional growth, and his relationship to the school, teachers, and patrons.

517—**Administration of Audio-Visual Communications Programs.** Four hours.

Prerequisite: Basic courses in the field or by permission.

Considers problems in management of an intergrated program, including production, selection, utilization, and administration of communications media; problems of finance; functions and organization of different services; relationship among school systems, college, and community groups; and evaluation standards for various services.

518—**The Elementary School Principal.** Four hours.

A study emphasizing the administrative problems faced by the principal. Considers practices in administration, supervision, school plant, supplies and equipment, attendance, curriculum, personnel, and parent-teacher cooperation. Stresses the professional leadership of the principal.

520—**Basic Course in Educational Administration.** Four hours.

A basic course designed for teachers and prospective school administrators. This course emphasizes school organization, business management, personnel, public relations, school policies, board policies, leadership, school construction, school plant maintenance, transportation, special services, and evaluation.

526—**Supervison of Instruction.** Four hours.

A practical course in supervision from the standpoint of the elementary, junior high, or high school principal and supervisor of instruction. Deals with principles and procedures of supervision.

540—**Organization and Administration of Adult Education.** Four hours.

The design and administration of educational programs for adults will be studied. Emphasis will be given to the following: establishing objectives, evaluating needs, implementing programs, selecting course and instructional resources, financing and administering programs.

542—**Supervision and Curriculum in Reading.** Four hours.

A study of organizational patterns in reading curricula and methods of improvement in reading instruction in schools from the point of view of the reading supervisor or consultant and the school administrator.

550—**School Business Management.** Four hours.

A practical course in the over-all aspects of present day school business administration. The relationships of the educational program to the various business functions of a school district will be covered as well as the adaptation of current school financial accounting on a state and national basis for a local school system.

555—**Problems of the County Superintendent.** Four hours.

A course designed for county superintendents in which they study their problems under the direction of a graduate professor.

592—**Special Problems I, II, III.** One to three hours.

A problem study to develop knowledge and facility in a field of interest for the student which requires preparation of a scholarly paper under the supervision of a graduate professor. This registration must be approved by the departmental chairman upon the recommendation of the student's major professor.

594—**Field Problems in Production I and II.** Four hours each.

Opportunity to study local school problems of curriculum revision, course of study construction, evaluation of methods, building projects, community surveys, testing programs, and record systems under careful supervision of a graduate professor.

The project must be approved by the departmental chairman upon the recommendation of the student's major professor.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

611—**Advanced Curriculum Development.** Four hours.

This course is designed for the school administrator who has or will have responsibility for curriculum development in a school system. Areas covered are: modern elementary, junior high school, and senior high school curricula; the scope and sequence of curriculum patterns for a school system; correlation of elementary, junior high, and senior high curriculum and courses of study; in-service education of the instructional staff; and the utilization of community in curriculum development.

636—**Practicum in Educational Administration.** Four hours.

A study emphasizing problems connected with modern educational administration. Contemporary theories are related to the problems of administering the public schools from the standpoint of the superintendent and the central office staff.

638—**Practicum in Supervision.** Four hours.

This advanced course in supervision deals mainly with supervisory services provided from the central administrative office of the school district. A seminar approach is utilized in coordinating such services and individual problem solutions.

668—**Public School Finance.** Four hours.

Principles of taxation; local, state, and federal financing of public education; equalization of educational opportunity, budget making.

691—**Research in Educational Administration, Supervision, and Curriculum.** One to twelve hours.

692—**Special Problems.** Four hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problem.** Four hours.

Selection of practical educational problems for solution by candidates for Education Specialist Certificate, using research and professional knowledge. A scholarly report is required.

700—**Advanced School Administration and Supervision.** Four hours.

This course deals with the theory and concepts underlying present day school administration and supervision.

704—**School Community Relations.** Four hours.

A study of public relations problems including reporting to parents and acquainting the community with the purposes, methods, accomplishments, and needs of the school.

706—**Administration of School Buildings and Grounds.** Four hours.

Designed for the local superintendent, treating the problem of housing, such as surveys, architect, finance, site, plans and specification, equipment, awarding contract, construction procedures, accepting, building and care of grounds.

708—**Administration of School Personnel.** Four hours.

A course stressing the administrative relationships involved in developing satisfactory personnel policies, techniques, and regulations dealing with the pupil, the staff, and the public. The general principles of personnel management as they affect the pupil and staff, instructional and noninstructional, will be covered.

710—**School Law.** Four hours.

Legal aspects of such factors as school income, injury to pupils; keeping the school census, enforcing attendance, teaching certain subjects, and related matter.

711—**Higher Education in the United States.** Four hours.

This course provides an overview of the development, scope, philosophy, objectives, and recent innovations in colleges and universities.

712—**The Junior College.** Four hours.

This course treats the development, functions, programs, philosophy, issues, and research related to the junior college.

713—**Curricula in Higher Education.** Four hours.

This course is concerned with curricula offered in the junior and senior college with particular attention to problems and issues in general education, technical education, professional education, and graduate education. Innovation and research in instruction will also be considered.

714—**Organization and Administration of Higher Education.** Four hours.

This course is designed to: examine typical organizational patterns of colleges and universities; develop an understanding of the basic functions of governing and coordinating boards and of officials involved in college and university administration; and develop an understanding of principal problems faced in the administration of institutions of higher learning.

790—**Administrative Workshop I, II, III, IV, and V.** One and one-half hours per week. (Course may be repeated, with only nine hours counting toward a degree.)

791—**Research in Educational Administration, Supervision, and Curriculum.** One to twelve hours.

Prerequisite: Approval of the major professor.

794—**Field Problems in Administration I, II, III.** One hour each.

A project dealing with a specific problem in school administration. An on-the-job training program with the work being done under the supervision of a graduate professor. This registration must be approved by the departmental chairman upon the recommendation of the student's major professor.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF GUIDANCE (GED – 140)

John Alcorn, Chairman

Boroughs	Daniels	Durkee	Culherson	Gates
Gutsch	Langdon	Massey		Weatherford

The Guidance Department offers programs at the master's, specialist, and doctorate levels in guidance, counseling, and student personnel services. The programs are designed to provide specialized professional preparation in the

areas of: (1) School Guidance and Counseling; (2) College and University Student Personnel Work; (3) Community Agency Counseling; and (4) Counselor Education and Supervision.

MASTER'S DEGREES

The Guidance Department offers the Master of Education degree in school counseling, the Master of Science degree in college counseling, and the Master of Science degree in community counseling. The general requirements for these programs are as follows:

Admission

Regular: An undergraduate grade point average of 2.75 and a combined score of 750 or above on the aptitude sections of the GRE

Conditional: A student may be admitted on a conditional basis if he has:

(a) A score of 750 or above on the aptitude section of the GRE and a grade point average no lower than a 2.5

(b) A grade point average of 2.75 or above if the GRE is lower than 750.

Removal of Conditional Status: Maintain a B or better on each graduate course attempted during the first quarter as a full-time student. If a part-time student, a grade of B or better is required on the first twelve (12) hours or grades of B or better on all courses taken while completing the twelve-hour requirement.

Admission to Candidacy

1. An application for admission to candidacy must be filed with the Department upon the completion of twelve (12) to sixteen (16) quarter hours of course work in the Department.
2. Satisfactory completion of the English Proficiency Test.

Application For Graduation Graduation is based upon:

1. Completion of a minimum of forty-six (46) quarter hours course work in an approved program of studies.
2. Satisfactory completion of the comprehensive examination.
3. Satisfactory performance in the counseling practicum.

CURRICULUM PRESCRIPTIONS

The Master of Education Degree in School Counseling: The course pattern is designed to provide learning experiences in the area of school guidance and

counseling and will meet the professional and academic requirements for Class AA certification for elementary or secondary school counselors in Mississippi. A teaching certificate based upon a baccalaureate degree is a prerequisite for this program.

Required Courses: (36 hours)

RED 501—**Research: Its Introduction and Methodology.** Four hours.
CIF 504—**Foundations in American Education.** Four hours.
GED 506—**Fundamentals of Guidance.** Four hours.
GED 522—**Organization and Administration of Pupil Guidance.** Four hours.
GED 571—**The Information Services in Guidance.** Four hours.
GED 581—**Methods and Techniques of Counseling.** Four hours.
GED 582—**Use and Interpretation of Tests in Guidance.** Four hours.
GED 587—**Analysis of the Individual.** Four hours.
GED 600—**Guidance and Counseling Laboratory I.** Four hours.

TOTAL: 36 hours

Elective courses highly recommended: (10 - 12 hours)

GED 505*—**Guidance in the Elementary School.** Four hours.
GED 593 I—**Supervised Practicum.** Four hours.
PSY G-480—**Psychology of Personality.** Four hours.
or
SOC G-430—**Social Foundations of Personality.** Four hours.
ITE 511—**Organization and Philosophy of Vocational Education.** Four hours.
PSY 587—**Individual Psychological Testing: Stanford-Binet.** Four hours.
or
PSY 588—**Individual Psychological Testing: Wechsler-Scales.** Four hours.
EPY 510—**Advanced Educational Psychology.** Four hours.
EPY 574—**Child Psychology.** Four hours.
EPY 575—**Advanced Adolescent Psychology.** Four hours.
GED 684—**Group Counseling.** Four hours.
SPE G-486—**Psychology and Education of the Exceptional Child.** Four hours.

*Required for Elementary Counselors.

TOTAL: 46 - 48 hours.

The Master of Science Degree in College Counseling: The course pattern is designed to meet the professional preparation needs of a variety of individuals who expect to work in the broad field of college student personnel services. Providing a flexible program through the selection of electives and participation in variable field practicum experiences, the program is geared to the needs of college student personnel workers such as counselors, deans of men and women, directors of housing, directors of student affairs, directors of placement, directors of admissions, and registrars.

Required Courses: (32 hours)

RED 501—**Research: Its Introduction and Methodology.** Four hours.

CIF 504–**Foundations of American Education.** Four hours.
or
AED 711–**Higher Education in the U.S.** Four hours.
GED 506–**Fundamentals of Guidance.** Four hours.
GED 581–**Methods and Techniques of Counseling.** Four hours.
GED 582–**Use and Interpretation of Tests in Guidance.** Four hours.
GED 588–**Student Personnel Work in Higher Education.** Four hours.
GED 600–**Guidance and Counseling Laboratory I.** Four hours.
GED 5931–**Supervised Practicum.** Four hours.
or
GED 602–**Guidance and Counseling Laboratory II.** Four hours.

Elective Courses Highly Recommended: (14 - 16 hours)

GED 684–**Group Counseling.** Four hours
GED 571–**The Information Service in Guidance.** Four hours.
GED 586–**Seminar in Student Personnel Problems.** Four hours.
GED 580–**Marital and Pre-Marital Counseling.** Four hours.
EPY 510–**Advanced Educational Psychology.** Four hours.
or
EPY 512–**Learning and Instruction in Higher Education.** Four hours.
EPY 575–**Advanced Adolescent Psychology.** Four hours.
PSY G-455–**Social Psychology.** Four hours.
PSY G-480–**Psychology of Personality.** Four hours.
SOC G-450–**Social Institutions.** Four hours.
TOTAL: 46 - 48 hours.

The Master of Science Degree in Community Counseling: The course pattern for this degree program is purposely broad and flexible. It is designed to prepare individuals for counseling and personnel roles in a variety of community agency settings such as vocational rehabilitation, employment placement, community mental health, family and social welfare, church ministry, and business.

Required Courses: (28 hours)

SOC G-485–**Methods of Social Research.** Four hours.
or
RED 502–**Introduction to Statistics.** Four hours.
CIF 504–**Foundations of American Education.** Four hours.
or
CIF 509–**Social Foundations of Education.** Four hours.
GED 506–**Principles of Guidance.** Four hours.
GED 581–**Methods and Techniques of Counseling.** Four hours.
GED 582–**Use and Interpretation of Tests in Guidance.** Four hours.
GED 600–**Guidance and Counseling Laboratory I.** Four hours
GED 593–**Supervised Practicum.** Four hours.
or
GED 602–**Guidance and Counseling Laboratory II.** Four hours.

Elective Courses Highly Recommended: (18 - 20 hours)

GED 682—Community Resources for Guidance. Four hours.
GED 684—Group Counseling. Four hours.
GED 571—The Information Services in Guidance. Four hours.
GED 560—Introduction to Community and Rehabilitation Counseling. Four hours.
GED 563—Case Management Processes in Rehabilitation Counseling. Four hours.
GED 561—Socio-Psychological Aspects of Disability. Four hours.
GED 562—Medical Aspects of Disability. Four hours.
PSY G-445—Social Theory. Four hours.
PSY G-480—Personality Theory. Four hours.
PSY G-481—Abnormal Psychology. Four hours.
PSY 588—Individual Testing: Wechsler Scales. Four hours.
EPY 645—Psychology of Mental Retardation. Four hours.
SPE 505—Psychology and Education of Emotionally Disturbed. Four hours.
SOC G-429—Juvenile Deliquency. Four hours.
SOC G-420—Industrial Sociology. Four hours.
SOC G-430—Social Foundations of Personality. Four hours.
MGT 525—Human Relations in Business. Four hours.
MGT G-468—Wage and Salary Administration. Four hours.

TOTAL: 46 - 48 hours.

SPECIALIST CERTIFICATE

The Department of Guidance offers the Specialist Certificate in guidance and counseling with emphasis in (1) School Counseling, (2) College Counseling and Personnel Work, and (3) Community Counseling. As a sixth year advanced program, the specialist curriculum presupposes a master's degree in guidance or its equivalent and requires completion of an approved program of study including a minimum of forty-six (46) quarter hours credit beyond the master's degree.

The curriculum for the specialist program is purposely designed to be flexible in order that candidates may develop greater specialization in an area related to their individual professional goals. Included in the course of study is a minimum of twelve (12) quarter hours credit in cognate areas and an approved field study. The general requirements for the specialist certificate are as follows:

Admission

Regular: A grade point average no lower than 3.25 and a combined score of 800 or above on the aptitude section of the GRE.

Conditional: A grade point average between 3.00 and 3.25 on previous graduate work and a GRE score no lower than 800 or a grade point average no lower than 3.25 and a GRE score between 750 and 800.

Removal of Conditional Status: On the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first twelve (12) hours of course work numbered 500 or above or on all courses taken while completing this requirement.

Admission to Candidacy

1. The application for admission to candidacy must be submitted upon the completion of twelve (12) to sixteen (16) quarter hours of course work in the Department beyond a master's degree in guidance or its equivalent.
2. The English Proficiency Test must be satisfactorily passed.

Application for Graduation Graduation is based upon:

1. Completion of an approved program of studies containing a minimum of forty-six (46) quarter hours credit beyond a master's degree in guidance or its equivalent.
2. Satisfactory completion of a comprehensive examination.
3. Satisfactory completion, write-up, and defense of the field study.

DOCTORAL DEGREES

The Guidance Department offers the Doctor of Education (Ed.D.) and the Doctor of Philosophy (Ph.D.) degrees in guidance and counseling. General course requirements beyond the baccalaureate degree include a minimum of fifty (50) quarter hours work in the major area of guidance and counseling, a minimum of thirty (30) quarter hours work in an interdisciplinary supporting minor, and the remainder of 118 hours work in foundations excluding research tools.(languages and/or statistics) and dissertation.

Working from a common core of courses in guidance and counseling, the student may develop from among the following program emphases a program of study which is consistent with his professional needs and career objectives:

A. **School Guidance.** This emphasis is designed for individuals who expect to work as counselors, guidance directors, and directors of pupil personnel services in school settings.

B. **Student Personnel Work in Higher Education.** This emphasis is designed for individuals who expect to work as student personnel specialists and deans in college and university settings. Standards prepared by the Commission on Professional Development of the Council of Student Personnel Associations in Higher Education and the Interdivisional Committee of the American Personnel and Guidance Association serve as guides in developing programs of study.

C. **Counseling.** This emphasis is designed for students who are preparing for positions in college and university counseling centers and in community

agencies such as vocational rehabilitation, the Veterans Administration, and other agencies which utilize skills and competencies of doctoral-level counseling specialists. Students taking this emphasis typically are given greater exposure to counseling and human development theory and engage in extensive laboratory practice in counseling with a range of normal clients.

D. **Counselor Education and Supervision.** This emphasis is designed for students who plan to engage in the teaching and training of counselors at the college and university level. Students in this program typically combine either the school guidance or student personnel emphasis with the counseling emphasis and, toward the end of their program, are placed in supervised internship experiences in counselor education and supervision.

General Requirements for the Doctoral Program

Admission

Regular:	A minimum grade point average of 3.50 on previous graduate work and a combined score of 850 on the aptitude section of the Graduate Record Examinations.
Conditional:	A grade point average between 3.25 and 3.50 on previous graduate work and a GRE score no lower than 850 or a grade point average no lower than 3.50 and a GRE score between 800 and 850. An on-campus interview is required before a recommendation for conditional admission will be made.
Removal of Conditional Status:	On the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first twelve (12) hours of course work numbered 500 or above or on all courses taken while completing the requirement.

Qualifying Examinations

1. Should be taken after completion of approximately twenty-four (24) quarter hours work in the Department beyond a master's degree or equivalent in guidance.
2. May not be taken prior to admission to a doctoral program and satisfactory completion of the English Proficiency Test.
3. Must have taken at least one quarter of on-campus laboratory counseling practicum.
4. May be retaken one time after an initial failure. Students may be asked to retake all or parts of the examination after complying with departmental recommendations regarding additional study and preparation. Oral follow-ups to the examination may be scheduled at the discretion of the Department.

5. The results on a master's degree or specialist certificate comprehensive examination may not be substituted for this examination.
6. The doctoral advisory committee will be appointed, and the course planning sheet will be filed after satisfactory completion of the qualifying examinations.

Comprehensive Examinations

1. May be scheduled by individual appointment with the department chairman during or after the last quarter in which the student is enrolled in courses listed on the approved course of study.
2. Will consist of written and/or oral examination.
3. May be retaken one time after initial failure.
4. Must be completed a minimum of two quarters prior to graduation.

Residency

1. Completion of the doctoral residency requires full-time on-campus study for three consecutive quarters. During the residency period, students are expected:
   (a) To carry a minimum course load of twelve (12) quarter hours per quarter for three consecutive quarters or, in the case of student on one-half time University fellowships, thirty-six (36) quarter hours work in consecutive quarters.
   (b) To participate in a variety of credit and non-credit departmental activities including a residency seminar, laborary and practicum experiences, individual case work, field trips, and other related professional activities.
   (c) To be relieved of job responsibilities with off-campus employers.

Admission to Candidacy

Admission to candidacy for a doctoral degree will be approved by the student's advisory committee upon:

1. Completion of language and/or statistics requirements. Doctor of Education candidates will meet intermediate level statistics proficiency; Doctor of Philosophy candidates must show proficiency in one language and statistics.
2. Completion of residency requirements.
3. Satisfactory completion of the comprehensive examination.
4. Approval of a dissertation prospectus. The dissertation prospectus may be presented to the advisory committee for approval any time after the comprehensive examination has been satisfactorily passed.

Application For Graduation Graduation is based upon:

1. Completion of all requirements described above.
2. Successful defense of the completed dissertation.

COURSE DESCRIPTIONS (GED – 140)

G-480–**Curriculum Development for Occupational Orientation.** Four hours.

A course designed to introduce vocational teachers and counselors to principles of curriculum adaptation for school-based programs of occupational orientation. Emphasis is given to the acquisition, development and organization of materials and resources for an experiential learning approach.

G-484–**Methods and Techniques of Group Guidance.** Four hours.

A course designed as an introduction to the fundamentals of developmental group guidance. Special attention is given to procedures and activities common to occupational orientation, homeroom and other types of group work in classroom and institutional settings.

505–**Guidance in the Elementary School.** Four hours.

A survey of guidance theories and practices as they relate to elementary education. Designed to give elementary teachers, principals, and counselors a fundamental understanding of the role of guidance in the elementary school.

506–**Fundamentals of Guidance.** Four hours.

A survey of vocational and educational guidance services designed to give teachers, administrators, and beginning counselors a fundamental understanding of the role of guidance in school programs.

522–**Organization and Administration of Pupil Guidance.** Four hours.

Prerequisite: GED 506.

The course stresses administrative relationships in instituting and maintaining a program of guidance services, with a study of principles and techniques for formation and evaluation of a complete guidance program.

560–**Introduction to Community and Rehabilitation Counseling.** Four hours.

This course is designed to provide students with an orientation to community and rehabilitation counseling. Emphasis is given to historical and philosophical foundations, ethical and legal implications, counseling services, facilities and the interdisciplinary nature of community and rehabilitation helping services.

561–**Socio-Psychological Aspects of Disability.** Four hours.

This course is designed to help rehabiliation counselors more adequately understand the impact of disability on the rehabilitation process. Emphasis is given to theory and research findings from the social and behavioral sciences as they relate to the understanding of human disability. The case study method is used as an integrating activity.

562–**Medical Aspects of Rehabilitation.** Four hours.

This course is designed to familiarize students with medical terminology, with the muscular, skeletal and neurological systems, and with common diagnostic

categories encountered in rehabilitation counseling. Understanding utilization of symptomatology, treatment, and other management aspects of physical medicine is emphasized. The major outcome is directed toward developing the counselor's ability to interpret medical information in conjunction with developing a plan of action for disabled clients.

563—**Case Management Processes in Rehabilitation Counseling.** Four hours.

This course will focus on methods of casefinding; eligibility determination; the collection and evaluation of medical, psycho-social, and vocational information; the establishment of feasibility goals; provision of case services; job placement and case recording in the rehabilitation process.

571—**The Information Service in Guidance.** Four hours.

Prerequisite: GED 506.

A survey of practices in guidance programs which give teachers, administrators, and counselors knowledge and skills in setting up and maintaining an occupational information file and in making the materials available to students.

580—**Marital and Pre-Marital Counseling.** Four hours.

Prerequisite: GED 506 or consent of the instructor.

The course is designed to present information related to: (1) sex role concepts in the maturation of young people; (2) sex development and premarital and early marriage adjustment problems; and (3) successful techniques used in pre-marital and marital counseling as revealed in case studies.

581—**Methods and Techniques of Counseling.** Four hours.

Prerequisite: GED 506

A course designed to acquaint the guidance worker with the basic fundamentals of counseling and interviewing the individual. Attention is given to both old and new methods and techniques used in counseling.

582—**Use and Interpretation of Tests in Guidance.** Four hours.

Prerequisite: GED 506.

A course designed to provide the counselor with means of securing, recording, and using data concerning individuals and groups. Emphasis is given to practical experience in using tests, inventories, and other devices for measurement.

586—**Seminar in Student Personnel Problems.** Four hours.

Discussion and analysis of a variety of problems facing workers in guidance, counseling and student personnel services. Special attention is given to the legal and ethical implications of personnel work.

587—**Analysis of the Individual.** Four hours.

Prerequisite: GED 506.

A study of methods and techniques used by teachers and guidance workers in helping individuals evaluate themselves, with consideration of collecting, assembling, and using information. Emphasis is on subjective techniques.

588—**Student Personnel Work in Higher Education** Four hours.

This course is designed to give students interested in entering personnel work at the college level a knowledge of the scope of personnel work, including those services basic to campus life, services for student growth, and services for special student groups. The professional nature of the personnel worker is emphasized.

592—**Special Problems I, II, III.** One hour each.

A problem study to be approved by the departmental chairman to develop knowledge and facility in a field of interest of the student. Preparation of a scholarly paper is required.

593—**Supervised Practicum I, II.** Four hours each.

This course provides students with opportunities to do guidance, counseling and/or small group work under supervision in settings appropriate to their area of specialization.

594—**Advanced Guidance Research Seminar.** Four hours.

An advanced course for students interested in individual and group research methods, materials, and procedures in the various guidance service areas.

596—**Field Problems I, II, III.** Two hours each.

This course provides students with the opportunity to do independent studies relating to problems of a practical nature which are encountered in field settings. Students are expected to develop a proposal for carrying out the study and a written report of findings at the conclusion.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

600—**Guidance and Counseling Laboratory I.** Four hours.

Prerequisite: Permission of instructor.

This course serves as an introduction to functional counseling practices. As a part of the basic guidance core, Laboratory I provides supervised practice in counseling activities that are primarily educational-vocational in nature. Particular attention is given to the development of competencies in counselor-client interaction, in the selection and proper use of tests and information as aids to the counseling process and in report writing. Attention is given to familiari-

zation with intake procedures commonly used by counseling agencies. Students are expected to engage in a minimum of 30 contact hours with clients during the quarter.

602—**Guidance and Counseling Laboratory II.** Four hours.

Prerequisites: GED 600 or equivalent and permission of instructor.

This course is designed to bring about a more sophisticated understanding of educational, vocational, and personal--social counseling. Working under direct supervision through visual and audio monitoring, students work with a variety of clients and are expected to develop a high level of professional competency in counseling interaction, in individual assessment, and in test reporting. Counselors are expected to engage in a minimum of 45 contact hours with clients during the quarter.

603—**Guidance and Counseling Laboratory III.** Four hours.

Prerequisites: GED 602 or equivalent and permission of instructor.

This course serves as a more advanced phase of counseling laboratory training with a focus on counseling of a personal-social nature. Students are expected to develop competencies in utilizing a range of procedures designed to bring about positive growth with clients having personal-social difficulties. Working under close supervision, students receive feedback through both audio and video tapeing.

681—**Seminar in Systems of Counseling.** Four hours.

Prerequisite: Consent of instructor.

A course designed to explore both the theoretical and functional implication for interaction settings. Students shall explore in depth specific theories of counseling and the application of such theories to practice. Extensive use of video-tapes and other audio-visual materials will be made.

682—**Community Resources for Guidance.** Four hours.

Prerequisite: Consent of instructor.

A course designed to study the nature and development of agency resources within the community, along with their purposes and functions, such as vocational rehabilitation, employment service, scouts, family counseling service, mental health centers, public welfare, and health agencies. Emphasis is on locating, understanding, and utilizing the services of the agencies in the exchange of information and for referral of counselees.

684—**Group Counseling** Four hours.

The study of group human encounter situations through theoretical constructs and functional experiences gained in a quasi-group counseling setting.

691—**Research in Guidance.** One to twelve hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problems.** Four hours.

700—**Internship in Student Personnel Services I, II.** Four to eight hours.

Prerequisites: GED 588 and consent of instructor.

740—**Testing College Students.** Four hours.

Prerequisite: GED 582 or equivalent course.

Students are introduced to major types of testing programs available to institutions of higher learning. Emphasis is given to functional uses to test data in key areas such as admissions, research and evaluation, long-range planning, and counseling.

750—**Readings in Student Personnel Work.** Four hours.

Advanced seminar in which students do extensive reading in social and cultural foundations of guidance and student personnel work. Weekly seminar is designed to structure and integrate reading activities. In addition to general reading, students select one area of special interest for term project.

760—**Administration and Organization of Student Personnel Services.** Four hours.

This course introduces students to the organization of student personnel services within the context of the college or university. Stress is given to administrative principles and relationships involved in initiating and maintaining an effective program of student services. Outside consultants and case studies are utilized.

791—**Research in Guidance.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF INDUSTRIAL AND TECHNICAL EDUCATION (ITE -- 165)

E. Max Hunter, Chairman

Moeller

The Department offers programs leading to the Master of Science degree.

(1) **Major in Industrial Arts Education**: The student will be guided by the department chairman in selecting a minimum of thirty (30) quarter hours from courses offered in the Department, and sixteen (16) quarter hours in a minor area. The minor may include education, psychology, and guidance courses.

(2) **Major in Vocational Technical Education**: The student will be guided by the department chairman in selecting a minimum of twenty-eight (28) quarter hours offered in the Department, and an additional twenty (20) quarter hours in the administration and curriculum and instruction areas.

For additional information pertaining to the specific courses in the program, contact the department chairman.

COURSE DESCRIPTIONS (ITE -- 165)

G-400 - **School Shop Planning and Equipment Selection.** Five hours.

Planning the lay-out of rooms and other building facilities. Purchase and arrangement of equipment. Selection of suitable equipment for special conditions. The cost of equipment, supplies, and maintenance.

G-401 - **Shop Care and Management.** Five hours.

A study of machine placement; student movement; arrangement of safety zones; upkeep and repair of tools; tool storage and distribution; storage of materials; assembly areas; general appearance of the shop.

G-403 - **Occupational Analysis and Course Construction.** Four hours.

Techniques and procedures in analyzing occupations into their basic elements and arranging these elements for instructional purposes.

G-404 - **Problems of the Coordinator.** Four hours.

Problems, procedures, and techniques in the operation of cooperative, part-time, and evening school programs, including the study of state and federal regulations and reporting.

G-431 - **Principles of Trade and Industrial Teaching.** Four hours.

Interest and the motivation of learning in the shop, the development of

reasoning ability and manipulative skill, job and lesson planning, teaching devices and procedures, shop management, measurement of achievement, interschool and community relations.

G-432—**Problems of Adult Education.** Four hours.

Rise of the adult education movement; learning abilities, educational interests and needs of adults; problems and procedures in organizing and operating adult educational programs; relation of adult education to public school education.

G-433—**Curriculum Construction for Cooperative and Adult Vocational Classes.** Four hours.

The derivation of objectives; selection and arrangement of instruction units and materials for cooperative and evening classes; the construction and use of evaluative devices.

G-434—**Occupational Surveys.** Four hours.

A study of problems, methods, and procedures involved in planning, organizing and conducting occupational surveys in local communities and labor market areas.

502—**Foundations and Principles of Industrial Arts.** Four hours.

A basic course of the underlying philosophy and principles of industrial arts education. Objectives and relations to allied fields. Research and individual reports required.

503—**Establishing the Industrial Arts Program.** Four hours.

A detailed consideration of the individual school program in industrial arts, its organization, physical and educational requirements, and coordination with other educational requirements. Specific problems studied and reported.

504—**Shop and Small Plant Design.** Four hours.

Fundamental problems in design of work space. Working drawings and reports required.

505—**History of Industrial Education.** Four hours.

A study of leaders, movements, and agencies in the development of industrial education. A critical consideration of economic and social factors in the development of industrial education in the United States is made.

506—**Philosophy of Industrial Arts Education.** Four hours.

A study and evaluation of the various viewpoints of the leading philosophers in the field.

507—**Organization of Instructional Materials in Industrial Education.** Four hours.

A systematic examination of instructional materials and methods in industrial arts; research and reports required.

511—**Philosophy and Organization of Vocational Education.** Four hours.

The basic principles involved in the development and operation of vocational programs under state and federal vocational laws.

530—**Advanced Graphic Science.** Four hours.

A study of the methods and materials used in graphic science, advanced engineering and architectural drafting. Study of the literature and techniques in this field.

562—**Research Methods: Industrial Arts.** Four hours.

A study of research methodology in industrial subjects with emphasis on design of experiments, research procedures, and statistical treatments.

592—**Special Problems in Industrial and Technical Education.** One to four hours.

Intensive study of a selected research area or problem in industrial and technical education.

594—**Seminar in Industrial Arts Problems I, II, III.** Two hours per quarter. May be taken three quarters.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

DEPARTMENT OF LIBRARY SCIENCE (LS – 170)

John H. M. Chen, Chairman

Tracy

The Department of Library Science participates in programs leading to the Master of Arts and Master of Science degrees. The general requirements for these degrees are outlined in Part IV of this **Bulletin.** As a prerequisite, a student must present the equivalent of the following undergraduate library science courses and meet the general requirements for admission to the University's graduate program: LS 301, LS 427, LS 428, LS 462, and LS 463. Students planning to use this program for a Class AA certificate must meet the requirements for a Class A certificate including LS 302, **Books and Related Materials for Children,** and LS 303, **Books and Related Materials for Young People.** Students will elect additional courses on the basis of their field of interest and the recommendations of their adviser.

For the Master of Arts degree, a minimum of forty-six (46) graduate hours is required, half of which must be in courses numbered above 500. In addition to thirty (30) hours of graduate courses in library science the student must complete sixteen (16) graduate hours in an academic minor approved by the Department, demonstrate proficiency in a modern language, and write a thesis. Appropriate graduate courses in research methods, principles of administration, statistics, etc., may be accepted as a part of the major when approved by the department chairman.

For the Master of Science degree, a minimum of forty-six (46) graduate hours is required, half of which must be in courses numbered above 500. In addition to thirty (30) hours of graduate courses in library science the student must complete sixteen (16) graduate hours in a minor approved by the Department. There is no foreign language requirement and the writing of a thesis is optional.

COURSE DESCRIPTIONS (LS – 170)

G-470–**Multi-Media Materials and Services.** Four hours.

Principles and methods of developing multi-media materials and services in modern libraries. Emphasis is placed on the selection, evaluation, acquisitions, organization, storage and utilization of multi-media in various types of libraries.

G-471–**Library Preparation and Production of Multi-Media Materials.** Four hours.

Fundamental techniques for design and production of multi-media materials for the purpose of using in the various libraries and media centers with emphasis on laboratory practice in the preparation and production of such materials.

G-472–**Administration and Supervision of School Media Center.** Four hours.

Prerequisite: LS G-470 or LS G-471

A survey of the current trend for a media center in the modern school system with special attention to standards, planning, administration, personnel, facilities and equipment, materials, services, and management procedures of print and non-print materials.

510–**The Library in Society.** Four hours.

Particular attention is given to the public library's relationship to social, governmental, and educational agencies, and the national and international role of the library.

520–**History of Books and Printing.** Four hours.

525–**Communication and Libraries.** Four hours.

Introduction to the audience, content, control, and channels, of distribution of newspapers, radio, television, and motion pictures, with special attention to the relationship of the library to these media and its role as an agency of communication.

530—**Advanced Reference and Bibliography.** Four hours.

535—**Advanced Classification and Cataloguing.** Four hours.

Prerequisites: LS 462 and 463.

540—**The College and University Library.** Four hours.

541—**The Public Library.** Four hours.

542—**Special Libraries.** Four hours.

550—**Library Service to Children.** Four hours.

555—**Library Service to Young People.** Four hours.

560—**Introduction to Information Science and Technology.** Four hours.

An introductory survey of information science and technology as related to library operation; overview of approaches and techniques currently developed to meet the information demands of research oriented library users. Emphasis is placed on terminology, historical background, system design and analysis, technological development, dissemination, organization, collection, storage, retrieval, interpretation, use of information and their potential for library information services.

561—**Library Automation.** Four hours.

A study of theory and practices in the application of electronic data processing equipment and utilization of automatic procedures for the performance of various library functions. Special attention is given to the augmentation of circulation, reference work, acquisitions, cataloging, book catalog, book selection, serials control, inventory control, personnel and budget procedures.

562—**Information Retrieval Systems.** Four hours.

A survey and evaluation of the structure and operation of information storage and retrieval systems currently applied in libraries and information centers with special emphasis on abstracting, indexing, file organization, question analysis, research strategy, thesaurus construction and use.

565—**Bibliography and Literature of the Humanities.** Four hours.

Selection, evaluation and utilization of library resources in the humanities with special attention to the development of collections in philosophy, religion, literature, art, music, and related fields.

566—**Bibliography of the Social Sciences.** Four hours.

Study and evaluation of major library resources in the social sciences with emphasis given to the development and growth of bibliographic and reference materials in the fields of history, political science, economic and business,

geography, psychology, education, sociology and social welfare, anthropology, and related fields.

567—**Bibliography of Science and Technology.** Four hours.

An intensive study of library materials used in building collections and providing information in the pure and applied sciences. Special attention to such pure sciences as physics, chemistry, and biology, and to applied sciences of engineering, technology, agriculture and related fields.

568—**Research Methods in Library and Information Sciences.** Four hours.

A survey of scienctific research methods and their application to the fields of library and information sciences; designed to prepare students to select, formulate and develop research projects as well as evaluate completed research in library and information sciences and related areas.

591—**Research in Library Science. One to twelve hours.**

592—**Special Problems I, II, III.** One to three hours.

Prerequisite: LS 540, 541, or 542.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

DEPARTMENT OF PSYCHOLOGY (PSY)

Ray S. Musgrave, Chairman

Baker	Burgess	Hildman	Huckabee	Koeppel
Lowe	Lucy	McCullough	Mehearg	Moffat
M. Rabin		Sisemore	Welker	Yarnell

The Department offers both the Master of Arts and the Master of Science degrees, and doctoral programs in general psychology, in clinical psychology, in developmental psychology, and in school psychology. The general requirements for master's and doctoral degrees are listed in Part IV of this **Bulletin.**

Students desiring to do graduate work in psychology must have a foundation of undergraduate courses in statistics and experimental psychology. Foundation

courses in physiological psychology, psychological measurement, and the history of psychology are also highly recommended as prerequisites. A minimum total score (quantitative + verbal) of 1,000 on the Aptitude Section of the Graduate Record Examinations is required for regular admission to graduate work in psychology. Students seeking admission to post-master's level work normally are required to come to the campus for a personal interview as a part of the application procedure for advanced standing.

THE MASTER OF ARTS DEGREE IN PSYCHOLOGY

This degree program is planned to prepare students for advanced graduate work to the doctoral level, or to teach in junior or senior colleges, or to work in certain research settings. Candidates must pass the foreign language requirement and are required to write a thesis. Core courses for this degree include 562, 563, 531, 522, 524, 503, 594, and 598.

THE MASTER OF SCIENCE DEGREE IN PSYCHOLOGY

This degree plan is essentially a professional-training, terminal program with emphasis on formal coursework and paralleling practicum experience in schools, community mental health centers, hospitals and state schools for the mentally retarded, etc. The emphasis is on psychometrics and behavior modification. Core courses include 562, 503, 505, 531, 534, 587, 588, and 594 with supervised practicum for a minimum of five quarters. Neither a foreign language nor a thesis is required in this degree program. It normally requires two years to complete.

THE DOCTOR OF PHILOSOPHY DEGREE

The sequence of courses leading to the Doctor of Philosophy degree in general psychology is planned to prepare students to be college and university teachers of psychology, or to become research works in a variety of settings, including universities, governmental agencies, schools and hospitals, and industry.

The Doctor of Philosophy degree in clinical psychology is planned to prepare students for diagnostic, psycho-therapeutic and research work in a variety of settings which represent programs for community-wide prevention or amelioration of mental illness. The sequence of courses and other experiences provided for these students is outlined according to American Psychological Association standards. Included in the program are wide practicum and internship experiences both in the University Clinic, mental hospitals, and in community mental health and mental retardation settings.

The doctoral program in developmental psychology is designed to prepare students to be college and university teachers and to conduct basic and applied research in the various areas of developmental psychology. An interdepartmental sequence of courses stresses the theoretical and empirical foundations of child and adolescent psychology as well as various areas emphasizing exceptional children. Developmental research is encouraged in

conjunction with the experimental, clinical, or school programs within the Department. In addition, campus facilities for observational studies and child research include the Infant Development Center and the University Nursery and Kindergarten schools. Plans are being formulated for a mobile Developmental Laboratory.

The doctoral program in school psychology consists of a sequence of courses and other experiences which prepare students for a variety of psychological services in schools, or to conduct research in schools on psychological development, learning and pupil-teacher interaction, psychological measurement, educational psychology, and psycho-educational processes.

Students contemplating graduate work in psychology are invited to communicate directly with the Department of Psychology.

COURSE DESCRIPTIONS

PSYCHOLOGY (PSY – 175)

PSY G-445–**Social Psychology**. Four hours. Winter and Summer.

Prerequisite: PSY 201.

Psychological factors and influences in group behavior. Study of the individual in group situations, and the influence of the social environment on his behavior and development.

PSY G-449–**Industrial Psychology**. Four hours. Fall

Prerequisite: PSY 201.

Applications of psychological principles and methods to problems of industry emphasizing employee selection and placement, merit rating, accident reduction, training and measurement and improvement of employee morale.

PSY G-451–**Psychological Measurement**. Four hours. Winter and Summer.

Prerequisites: PSY 201 and 360 or equivalent.

Theory, problems, and techniques of psychological measurement. Group tests of ability, aptitude, interests, and personality are emphasized.

PSY G-470–**Sensation and Perception**. Four hours.

Prerequisite: PSY 370.

A survey of sensory and perceptual processes with emphasis on the visual system.

PSY G-472–**Psychology of Learning**. Four hours.

Prerequisite: PSY 370.

A study of the basic problems, theories, concepts, and research in the areas of human and animal learning.

PSY G-474–**Comparative Psychology**. Four hours.

Prerequisite: PSY 370.

An introduction to the study of animal behavior with special emphasis on the comparison of psychological processes along the phylogenetic scale.

PSY G-480–**Psychology of Personality**. Four hours: Winter and Summer.

Prerequisites: PSY 201 and permission of the instructor.

A study of the factors involved in the development of the mature personality, with an analysis of the structure and dynamics of personality; critical review of methods of personality evaluation.

PSY G-481–**Abnormal Psychology**. Four hours. Fall and Spring.

Prerequisites: Good background in psychology and permission of the instructor.

Study of the major psychoses, the psychoneuroses, and mental deficiency. Primarily for psychology majors, pre-medical students, and students planning to enter law, social work, teaching, or the ministry.

PSY G-482–**Physiological Psychology**. Four hours. Winter and Summer.

Prerequisite: PSY 201

Relationships between physiological functions, especially those of the nervous system, and psychological functions, including perception, emotion, motivation and learning. Primarily for psychology majors and pre-medical students.

PSY G-484–**History and Systems of Psychology**. Four hours. Fall and Spring.

Prerequisite: Permission of the instructor.

Review of the history of psychology and intensive study of current systems of psychology. Primarily for psychology majors as final senior course.

PSY 502–**Advanced Experimental Psychology**. Two hours. Fall and Winter. May be taken twice for credit.

Critical evaluation of and use of a variety of experimental techniques. Each student conducts an original study.

PSY 505–**Research Evaluation in the Behavioral Sciences**. Four hours.

Seeks to develop skill in evaluating the methodological soundness and usefulness of behavioral science research.

PSY 522–**Personality**. Four hours.

Consideration of the major theories of personality, and research on the development and measurement of personality.

PSY 523–**Personnel and Industrial Psychology**. Four hours.

Intensive study of selected problems in industrial and personnel psychology.

PSY 524—**Physiological Psychology.** Four hours.

Study of neurophysiological mechanisms in behavior, and related problems.

PSY 531—**Clinical Psychology.** Four hours.

Prerequisite: Permission of the instructor.

A survey course intended to acquaint the student with the field of clinical psychology. Emphasis on the use of clinical tests in personality diagnosis, a survey of psychotherapeutic techniques, and the research functions of the clinician.

PSY 534—**Principles of Behavior Modification.** Four hours.

Prerequisite: Permission of the instructor.

An intensive study of the principles of behavioral change and the evaluation of educational and clinical research in behavior modification. Research projects will be required.

PSY 536—**Pre-Practicum in Clinical Psychology.** One to four hours per quarter with a maximum of twenty quarter hours. Every quarter.

Prerequisites: PSY 521, 587, or 588, and permission of the instructor.

Open only to psychology majors planning to enter the clinical field.

This course is designed to give actual clinical experiences to the beginning graduate student. Administration and interpretation of psychological tests as well as therapeutic work with children and adults.

PSY 538—**Introduction to Personality Assessment.** Four hours.

Prerequisite: Permission of instructor.

Introduction to the theory and use of various psychological tools, including objective and projective devices as well as interviewing techniques.

PSY 549—**Management Training and Development.** Four hours.

Study of the principles and procedures of the training and development of management, with emphasis on surveying training needs, applying the principles of learning and motivation in implementing training methods and techniques, and evaluating results of training and development.

PSY 562—**Research Methods: Descriptive Statistical Methods.** Four hours.

Prerequisite: PSY 360 or permission of instructor.

A brief review of measures of central tendency and variability with emphasis upon correlation theory, techniques of calculation and application of correlation methods to tests and research data. Introduction to sampling problems, Pearsons Product Moment Method of Correlation, biserial, point biserial correlations, tetrachoric correlation, contingency correlation, partial and multiple correlation.

PSY 563—**Research Methods: Significance Tests and Experimental Designs.** Four hours.

Prerequisite: PSY 562 or permission of instructor.

A brief review of descriptive statistics and normal curve functions. Study of inference and sampling theory emphasizing parametric and non-parametric tests of significance: critical ration, t-test, chi square, analysis of variance, problems of experimental design.

PSY 587—**Individual Psychological Testing: Stanford-Binet.** Four hours.

Prerequisite: Approval of departmental head or instructor.

To equip psychological workers to administer individual intelligence tests, and to interpret and apply the test results for diagnosing difficulties in scholastic and personality adjustment. Thorough analysis and intensive practice in mental testing is afforded. The Terman-Merrill Revision of the Stanford-Binet is employed.

PSY 588—**Individual Psychological Testing: Wechsler Scales.** Four hours.

Prerequisite: Approval of departmental head or instructor.

To equip the psychological worker to administer individual intelligence tests, and to interpret and apply the test results for diagnosing difficulties in scholastic and personality adjustment. Thorough analysis and intensive practice in mental testing is afforded. The Wechsler Scales are employed.

PSY 591—**Research in Psychology.** One to twelve hours.

PSY 592—**Special Problems I, II, III.** One to three hours. On demand.

Intensive study of selected research area or field of professional psychology.

PSY 594—**Seminar in Problems in Contemporary Psychology I, II, and III.** One or two hours each quarter for three quarters, not to exceed a total of six hours. Fall, Winter, Spring sequence.

PSY 597—**Independent Study and Research.** Four hours.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

PSY 598—**Thesis. Four hours.** Credit deferred until thesis is completed.

PSY 602—**Experimental Design.** Four hours. Spring.

A study of the rationale underlying the selection of appropriate design for experimental work and the analysis and interpretation of results obtained through the use of such designs.

PSY 620—**Philosophy of Science.** Four hours.

A study of scientific methodology, theory construction, and system building in modern psychology.

PSY 640—**Comparative Psychology.** Four hours.

An examination of methodology employed in animal research, and results of experimentation in the area of animal behavior.

PSY 650—**Motivation.** Four hours.

Prerequisite: EPY 503 or EPY 603.

A study of the current theories and research in the area of human and animal motivation.

PSY 651—**Advanced Psychological Measurement.** Four hours.

Prerequisite: PSY 562 (PSY 451 is recommended).

An intensive study of the theory and techniques of psychological measurement. Reliability, validity, combining tests into a battery, test construction and scaling are emphasized.

PSY 660—**Perception.** Four hours.

Prerequisite: Permission of the instructor.

The development and nature of human perception and its relation to adaptive behavior.

PSY 672—**Advanced Psychopathology.** Four hours.

Prerequisites: PSY 481, PSY 522, and permission of the instructor.

Intensive study of personality dynamics as related to aberrant behavior, with emphasis on current research.

PSY 676—**Experimental Child Psychology.** Four hours.

Prerequisite: PSY 370 or permission of the instructor.

An intensive study and evaluation of theory, methodology and research in child psychology.

PSY 677—**Seminar in Developmental Psychology I, II, and III.** Four hours each.

Prerequisite: Permission of the instructor.

Consideration of specific contemporary problems and issues in developmental psychology.

PSY 701—**Factor Analysis.** Four hours. Summer.

Methods of multivariate analysis, emphasizing methods of factor analysis and cluster analysis.

PSY 710—**Personality Assessment.** Four hours.

Prerequisites: PSY 521 and permission of instructor.

A study of the theory and practice in the selection, administration, and

interpretation of tests used in assessment of personality. It is recommended that this course be taken in conjunction with PSY 731 I.

PSY 731—**Clinical Psychology Practicum I, II, III.** Four hours each. Fall, Winter, and Spring.

Prerequisites: PSY 521, PSY 587, PSY 588, and permission of the instructor. Open only to psychology majors at the doctoral level.

An analysis of the interrelations between behavior disorders and psychodiagnostics with a view to the selection and application of appropriate therapeutic programs within a clinic setting.

PSY 740—**Systems of Psychotherapy.** Four hours.

Prerequisites: PSY 672 and permission of instructor.

An analysis of the theories and techniques of current systems of psychotherapy.

PSY 787—**Advanced Experimental Psychology I, II, III.** Four to twelve hours.

For graduate students who wish to conduct research on individual problems not included in graduate thesis. Emphasis is placed upon background preparation, design and analysis of research data. Problems should be of publishable quality.

PSY 791—**Research in Psychology.** One to twelve hours.

Prerequisite: Approval of the major professor.

PSY 792—**Seminar in Case Studies.** Two hours.

Prerequisite: Permission of the instructor.

Presentation of actual case studies for evaluation and discussion by advanced graduate students.

PSY 795—**Internship in Clinical Psychology.** Credit arranged.

Prerequisite: Successful completion of clinical psychology practicum and approval of Director of Clinical Psychology Training. Required calendar year of internship in a mental health setting approved by the American Psychological Association. Credit may not be applied toward a graduate degree.

PSY 797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with a major professor or making use of the library or other University facilities must enroll in this course.

PSY 798—**Dissertation.**

EDUCATIONAL PSYCHOLOGY (EPY – 180)

EPY G-440–**Learning in Adult Education.** Four hours.

A study of learning in adulthood, and related to a range of educational programs.

EPY 503–**Learning and Motivation I.** Four hours.

Consideration of the basic concepts, problems, and research methodology in the studying of learning and motivation.

EPY 510–**Advanced Educational Psychology.** Four hours. Fall, Spring, Summer.

Designed primarily for the graduate student wishing to broaden his knowledge in the field of psychology of learning. Careful study of research and experimentation dealing with individual and group learning.

EPY 512–**Learning and Instruction in Higher Education.** Four hours.

A study of the application of learning principles and instructional techniques in higher education.

EPY 520–**Intelligence: Theories and Development.** Four hours. Winter.

Nature of intelligence, and its development; critical evaluation of methods of measurement; relation of intelligence to social efficiency.

EPY 530–**Case Studies in School Psychology Problems.** Two hours.

A course designed to present the student with studies of clinical, school, and other psychological problems encountered by the school psychologist. Critical evaluation of the process and practice of writing and presenting case material.

EPY 540–**Interpretation of Psychological Tests for Exceptional Children.** Four hours.

Prerequisite: Permission of the instructor.

A study of the various psychological tests used in the appraisal and evaluation of exceptional children.

EPY 542–**Psychology of the Gifted Child.** Four hours.

Prerequisite: Permission of the instructor.

Study of the characteristics and needs of gifted children and the various means employed by the schools to provide for these children.

EPY 574–**Advanced Child Psychology.** Four hours. Winter, Summer.

A course dealing with the mental, motor, social, and emotional development of children of elementary school age. Stresses the application of developmental psychology to education and guidance. Considers child growth as progressive development.

EPY 575–**Advanced Adolscent Psychology.** Four hours.

An advanced study of the adolescent and his needs in the home, school, and community. Includes a survey of the research studies and literature on the period of adolscence, and individual and group reports.

EPY 580–**Leadership.** Four hours.

Prerequisite: Permission of the instructor.

Study of the factors affecting leadership in a school or industrial setting; emphasis is placed on status and esteem as factors.

EPY 591–**Research in Educational Psychology.** One to twelve hours.

EPY 593–**Seminar in Psychological Services in Schools I, II, III.** Two hours each. Fall, Winter, Spring sequence.

Advanced general psychology with special emphasis on relationships of each topic to the areas of school psychology, education of the handicapped, etc.

EPY 597–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

EPY 598–**Thesis.** Six hours. Credit deferred until thesis is completed.

EPY 603–**Learning and Motivation II.** Four hours.

An intensive study of the role of contemporary theories of learning and motivation in current research.

EPY 610–**Group Dynamics.** Four hours.

Prerequisite: EPY 580 or permission of instructor.

A study of theory and practice in group development and group dynamics.

EPY 622–**Community Mental Health.** Four hours.

Prerequisite: Permission of the instructor.

Concepts and techniques of mental health consultation with emphasis on the psychologist's role in the field of mental health.

EPY 645–**Psychology of Mental Retardation.** Four hours. Fall.

Prerequisite: Permission of the instructor.

Study of personality development, problems of adjustment, and abnormal behavior of the mentally retarded. Consideration of psychological and medical treatment of the emotionally disturbed, mentally retarded individual.

EPY 670—**Seminar in Teaching of Psychology.** Two hours. Winter.

An analysis of the psycho-educational problems involved in the undergraduate and graduate teaching of psychology.

EPY 680—**Practicum in Teaching Psychology.** Four hours. On demand.

Supervised teaching of courses in psychology.

EPY 685—**Brain Damage and Behavior.** Four hours. Winter.

Prerequisite: Permission of the instructor.

The numerous causes of brain injury are studied and their effects on the mental and physical behavior of man are considered.

PSY 690—**Advanced Social Psychology.** Four hours.

A study of theory, research, and practice related to group processes and their interaction with individual behavior.

EPY 696—**Practicum in School Psychology.** Four hours. On demand.

Provides an opportunity to perform the duties of the school psychologist under supervision. Group and individual testing, contact with school personnel, individual counseling, and community relations will be stressed.

EPY 791—**Research in Educational Psychology.** One to twelve hours.

Prerequisite: Approval of the major professor.

EPY 792—**Special Problems.** Four hours.

EPY 797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

EPY 798—**Dissertation.**

DEPARTMENT OF
RESEARCH AND HUMAN DEVELOPMENT
(RED) (CIF) (CIA)

L. C. Welker, Jr., Chairman

Berry Brantley Cooley Cooper Davidson Dennis Easterling
Gunn Kazelskis H. Knight Lee Padget Peters
O. Phillips L. L. Rogers Shaffer Sievers R. P. Thomas

The Department of Research and Human Development provides supportive

services in teacher education. At the graduate level, these services include Education Foundations, Educational Media, Research Training, and Adult Education. A research minor is offered at the specialist or doctoral level.

EDUCATIONAL FOUNDATION COURSES (CIF – 125)

504–**Foundations in American Education.** Four hours.

A survey of the philosophies, psychologies, and history of American education intended to give the student a fundamental understanding of more specialized courses in these fields. Required of all graduate students.

507–**Basic Course in Curriculum Development.** Four hours.

A study of social and psychological factors influencing curricular planning, principles and procedures for validating educational objectives, selecting and structuring experiences, initiating and directing curricular change, and evaluating results of curricular planning.

509–**Social Foundations of Education.** Four hours.

A study of contrasting motivations and values of various cultural groups and their implications for education. Particular emphasis is given to the economically and culturally disadvantaged.

519–**Utilization, Selection, and Preparation of Audio-Visual Materials.** Four hours.

General principles, problems, and practices involved in the selecting, utilizing, and preparing of audio-visual materials for instructional purposes. Emphasis on the advantages, limitations, and practical uses of each major type of materials.

532–**Measuring Results in Education.** Four hours.

A course designed to equip the teacher for effective selection and construction of tests for measuring specific achievement of teaching objectives and for statistical interpretation of data. Stresses use of teacher-made tests.

535–**Advanced Production Techniques.** Four hours.

Deals with the communications skills involving the production of basic types of audio-visual materials. Theory and practices are covered relative to planning, shooting, and editing picture stories.

560–**Economic Education for Teachers.** Four hours.

A course designed to assist teachers in obtaining a deeper knowledge and understanding of our economic system. Emphasis will be placed on the attainment of economic concepts and the correlation of these concepts into the social studies curriculum.

580–**Direction and Supervision of Student Teaching.** Four hours.

A study of general techniques of a supervising teacher, including observation,

guiding student teachers in planning, orientation of student teachers, student teacher participation and evaluation.

716—**History of Public Education in the United States.** Four hours.

A critical survey of the development of public education with emphasis on the social, political, religious, and economic forces that have influenced this development.

718—**Comparative Philosophies of Education.** Four hours.

A critical examination of philosophies and theoretical concepts of leading modern philosophies and their significance for education.

EDUCATIONAL RESEARCH TRAINING (RED – 135)

Harold V. Knight, Coordinator

The program in educational research offers the student two options:

1. A structured minor in educational research at the doctoral level.
2. A choice of a number of advanced research courses as additional course electives in the student's major or minor field.

MINOR

The structured minor in educational research at the doctoral level provides for maximum flexibility in meeting the unique needs for research training in the departmental major fields. A total of sixteen (16) hours **plus** RED 552 and 553 constitute the minimum requirements.

The required courses should be viewed as a minimum basis for training in educational research and are designed to prepare the student for more advanced study. Additional advanced courses offered in educational research are recommended for qualified students. Students desiring emphasis in psychology orientation may substitute equivalent statistics and design courses offered in the area of psychology. Such substitutions must be approved by both departments.

Curriculum Requirements*

CSS G-412—**Educational Statistics.** Four hours.
or
RED 612—**Computer Applications in Educational Research.** Four hours
RED 552—**Advanced Correlational Methods.** Four hours.
RED 553—**Significance Tests and Design.** Four hours.
RED 624—**Research Design in Educational Research.** Four hours.
RED 630—**Multivariate Analysis.** Four hours.

RED 796—**Advanced Educational Research.** Four hours.

Total—24 hours.

*Prerequisites: (1) Basic courses consisting of RED 501, 502, and CIF 532 are recommended. (2) A grade point average of 3.0 in RED 552 and 553 is required.

Suggested Educational Research Electives

CSS G-412—**Educational Statistics.** Four hours.
RED 618—**Practicum in Educational Research.** Four hours.
RED 624—**Design in Educational Research.** Four hours.
RED 694—**Special Problems I, II, III.** One hour each.
RED 691—**Field Problems in Educational Research.** One-twelve hours.

COURSE DESCRIPTIONS (RED – 135)

501—**Research: Its Introduction and Methodology.** Four hours.

Methods of scienctific inquiry, selection of a research topic, principles of reporting research, and functional statistical concepts.

502—**Introduction to Educational Statistics.** Four hours.

Basic concepts and computations in description statistics. Introduction to sampling procedures and inferential processes in educational research.

552—**Educational Research: Correlational Statistical Methods.** Four hours.

Prerequisite: RED 502 or permission of instructor.

A brief review of elementary statistics and normal curve functions. Correlation theory and application to educational data. Concepts and computations associated with bivariate, partial, and multiple correlation.

553—**Educational Research: Significance Tests and Statistical Methods for Experimental Design.** Four hours.

Prerequisite: RED 552

Probability theory and theoretical distributions in experimental design: binomial, normal curve, t ratio, chi square, and F ratio. Concepts and computations associated with the use of these distributions in making probability decisions in research, including t tests, simple analysis of variance, and complex analysis of variance through 3-way design.

612—**Computer Applications in Educational Research.** Four hours.

Prerequisites: RED 552, 553. (Recommended)

Skills development course in the computer analysis of behavioral science data and orientation toward the systems approach, communication procedures, and computer utilization in financial, pupil, and personnel accounting procedures. Practical applications will be emphasized.

618—**Practicum in Educational Research: Writing and Dissemination.** Four hours.

Prerequisites: RED 552, 553. (Recommended)

Overview of types of current research related to education, primarily in student's major field. Experience in application of appropriate research models, writing behavioral objectives, structure of research reports, critique of published research problems, presentation and analysis of student's proposed research problem.

620—**Measurement in Educational Research.** Four hours.

Prerequisites: RED 552, 553.

A survey of the theory of measurement including true score theory, reliability, validity, theoretical and applied item analysis and item selection techniques. Examination of measuring instruments applicable to research in the educational setting.

624—**Research Design in Educational Research.** Four hours.

Prerequisites: RED 552, 553.

Study of experimental and quasi-experimental designs in educational research and appropriate statistical treatment and interpretation. Emphasis upon sources of invalidity and utilization of design principle and statistical controls in educational research applications.

630—**Multivariate Analysis in Educational Research.** Four hours.

Prerequisites: RED 552, 553

Theory and application of multiple regression analysis, multiple and connical correlation, multiple discriminant analysis, factor analysis, and advanced Anova techniques to data in educational research. Emphasis upon principles of application and interpretation.

691—**Field Problems in Educational Research.** One to twelve hours.
Prerequisite: Approval of major professor and Educational Research Staff.

694—**Special Problems in Educational Research I, II, III.** One hour each.

Prerequisite: Approval of major professor and Educational Research Staff.

A problem study involving specific research procedures applicable to development of skills in different types of research within a field of interest. The preparation of a scholarly paper is required.

698—**Research Problem.** Four hours.

Selection and development of a practical educational research problem for the Education Specialist Certificate. A scholarly research paper is required.

796—**Advanced Educational Research.** Four hours.

A seminar in problems related to philosophy of scientific method as applied

to educational research, types of educational research, methods of observation and data collection, methods of quantifying a research data base, and methods of design, measurement, analysis, interpretation, and reporting of educational research.

ADULT EDUCATION (CIA – 110)

G-440–**Methods and Materials in Adult Basic Education.** Four hours.

The uses and adaptation of various materials and techniques for teaching adults will be reviewed with specific study of the relationship of basic subject matter and teaching methods.

G-441–**Foundations of Reading Instruction for the Adult.** Four hours.

This course is designed to examine the basis of reading instruction in relation to the needs and characteristics of the non-literate adult. Topics included are: the reading process; essential reading skills; effects of economic, personal, and social forces; and a review of current literature.

G-442–**Methods and Materials for Teaching Adults to Read.** Four hours.

This course will include a study of materials and methods appropriate for teaching reading to functionally illiterate adults. Materials, diagnostic and evaluative procedures, and laboratory experiences will be included.

DEPARTMENT OF SCIENCE EDUCATION (SCE – 380)

Bobby N. Irby, Chairman

F. Brown I. Brown Craven Flowers Matthews Sonnier

The Department of Science Education recognizing the increased emphasis on the art of science teaching and the additional opportunities for individuals with advanced training in these arts provides a program for the Master of Arts, the Master of Science, the Doctor of Philosophy, and the Doctor of Education degrees in Science Education.

In addition to the general requirements and procedures pertaining to graduate degrees as outlined in Part III and IV of this **Bulletin**, the following requirements must be fulfilled:

Master's Degree

1. Competion of fifty-eight (58) or sixty (60) quarter hours of graduate work.
2. A minimum of twenty-four (24) quarter hours in a specific science–biology, chemistry, geology, or physics.

3. A minimum of eight (8) quarter hours in related sciences.
4. Demonstration of competence in the following Professional Education areas:
   (a) Psychology of learning
   (b) History and philosophy of education
   (c) Statistical methods and procedures in education
   (d) Research methods in education
   (e) Guidance and educational testing
   (f) Public school science curriculum
   (g) Problems in science teaching

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty (20) quarter hours in professional education.

B. Thirty-eight (38) to forty-eight (48) quarter hours in the sciences and science education.

Approximately one-third of the graduate work will be in professional education and two-thirds in the sciences. Students with sufficient background are not required to take additional courses in professional education, but will complete their programs in the sciences.

A thesis carrying six quarter hours is optional and would substitute for two courses in education. The total program with thesis requires fifty-eight (58) quarter hours graduate credit. The thesis may involve research in a particular science or research in science education.

Doctor of Education Degree

1. Completion of a minimum of seventy-two (72) quarter hours of graduate work above that accepted at the master's level.
2. A minimum of twenty-four (24) quarter hours in a specific science—biology, chemistry, earth science, or physics.
3. A minimum of eight (8) quarter hours in related science.
4. Competence in the areas of professional education as listed above.

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty-four (24) hours in professional education.

B. Thirty-two (32) or more hours in the sciences.

C. Twelve (12) or more hours in science education.

In all, two-thirds or more of the graduate work will be in the sciences and science education. In planning the overall program consideration is given to the student's background and his particular interests and goals.

Additional requirements include demonstrated proficiency in educational statistics and independent research. Research, culminating in a dissertation, may deal with a problem in the student's science speciality or a problem in science education.

In addition to an evaluation of the student's record, tests and examinations are used for diagnostic purposes in planning programs. The Graduate Record Examinations verbal and quantitative scores and the National Teacher Examinations commons and teaching area scores should be submitted with the application for advanced graduate study. During the first or second quarter of study additional tests are administered by the Department and the College of Education and Psychology.

COURSE DESCRIPTIONS (SCE – 380)

G-400–**BSCS–Biology for Secondary Teachers.** Four hours.

Six hour lecture - laboratory per week.

Prerequisite: Biology background or permission of the instructor.

A detailed critical examination of the subject matter, techniques, and methods for teaching biology in secondary schools as proposed by the Biological Sciences Curriculum Study. Designed to orient teachers in modern biology subject matter and special techniques by presenting background material and special laboratory exercises. Emphasis is placed on the laboratory as the source of information from which sound conclusions can be drawn.

G-401–**CHEM–Chemistry of Secondary Teachers–Methods and Techniques.** Four hours.

Two hours lecture and four hours laboratory work per week.

Prerequisite: Chemistry background or permission of the instructor.

A course designed to familarize chemistry teachers with the materials, methods, and techniques of teaching chemistry developed by the Chemical Education Material Study Committee. Unifying principles of chemistry are emphasized, with laboratory work providing the basis of development. Not allowable as credit toward degree requirements for chemistry majors.

G-403–**Earth Science for Intermediate School Teachers.** Four hours.

Six hours lecture-laboratory work per week

Prerequisite: Earth Science background or permission of the instructor.

A course designed to familiarize teachers with the materials, methods, and techniques developed by the Earth Sciences Curriculum Project. Emphasis is placed on laboratory and field work for data collection, and principles of other sciences as they relate to the study of the earth.

G-404–**Biological Sciences for Intermediate School Teachers.** Four hours.

A detailed critical examination of the subject matter, techniques, and methods

for teaching the life sciences in a locally structured, student-oriented-classroom. Micro-teaching is provided to insure a new kind of teaching as required by new kinds of educational materials. This course may not be used to fulfill University core requirements.

G-405—**Physical Sciences for Intermediate School Teachers.** Four hours.

A detailed critical examination of the subject matter techniques, and methods for teaching the various modern physical science curriculum project materials. This course will orient teachers with the philosophy of science as a tool of learning and emphasize the use of the laboratory as a tool of science. This course may be used to fulfill University core requirements.

G-465—**PSSC—Physics for Secondary Teachers—Methods and Techniques.** Four hours.

Two hours lecture and four hours laboratory work per week.

Prerequisite: Physics background or permission of the instructor.

A course designed to familiarize physics teachers with methods, materials, and techniques of teaching physics developed by the Physical Science Study Committee. Not allowable as credit toward degree requirements for physics majors.

500—**Science Curriculum in the Public Schools.** Four hours.

Prerequisite: Permission of the instructor.

Involves a critical examination of the research, its implications, and trends in science course content. Course will include the use of seminars, research problems, independent study, advanced courses, etc., in the secondary schools.

501—**Problems in Science Teaching.** Four hours.

Prerequisite: Permission of the instructor.

A study of problems related to curriculum, methodology, activities, professionalism—scientific and educational, and evaluation in science teaching. Involves the examination of recent research in these areas.

502—**Techniques of Demonstrating and Experimenting with Scientific Principles.** Four hours.

Prerequisite: Permission of the instructor.

A course designed especially for general science teachers, considering fundamental aspects of biology, chemistry, geology, and physics. Provides for examination of modern material, equipment, and apparatus, and the use of the material in demonstrating and experimenting with scientific ideas.

510—**Physics for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

The physics course is designed principally for the purpose of providing

teachers with a deeper knowledge of matter and energy and understanding of their relationships. The course is organized around principles and general ideas (and their developments) that can be directly applied to the elementary grade. Particular attention is given to quantitative processes pertaining to the understanding of the properties of matter and energy.

511—**Chemistry for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

In keeping with the current trends in chemistry teaching, major emphasis in this chemistry course will be placed upon: (1) relating ideas and facts; (2) understanding widely applicable principles; (3) placing heavy reliance upon laboratory work; (4) striving toward closer continuity between subject matter and pedagogy; and (5) deriving the necessary operational and conceptional definitions necessary to think about chemical systems. There will be a shift of emphasis from descriptive chemistry toward chemical principles to represent the changes in chemistry that have taken place over the last two decades.

512—**Biology for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

A course in general modern biology emphasizing the molecular aspects of animate matter.

513—**Earth Sciences for Elementary Schools Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

This course is designed to provide elementary teachers with a general background understanding of natural phenomena of the earth with its relationships in space. Particular emphasis is placed on those processes that are directly applicable to grades 1 through 6.

598—**Thesis.** Six hours.

791—**Research in Science Education.** One to twelve hours.

796—**Seminar.** Two hours each quarter for no more than three quarters.

Meets for two hours weekly.

Discussion of current trends and practices in science education; invited speakers; and discussions of prospecti and research of current students in science education.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF SPECIAL EDUCATION (SPE – 190)

William V. Plue, Chairman

Cotten Musgrave Norsworthy Pierce

The Master of Education degree in special education is offered to prepare master teachers and administrative personnel for programs for exceptional children. The program is interdepartmental and may be individualized depending on one's experience and background. Basically, the student will place his major emphasis of study in an area of exceptionality (mental retardation, learning disabilities, emotionally disturbed, visually handicapped, or physically handicapped) plus one cognate area. Cognate area may include administration, counseling and guidance, psychology or educational psychology, exceptional children, reading, research, sociology, or speech correction as approved by the Department. The master's program requires twelve (12) quarter hours in foundations (RED 501, CIF 504, EPY 510), sixteen (16) quarter hours in major area, twelve (12) quarter hours in cognate area, and electives related to the individual's program to make a total of forty-eight (48) quarter hours.

Courses required for special education certification in Mississippi must be taken and completed before a gradute degree will be given. Candidates must be eligible for an A certificate in the area in which they seek the master's degree.

The doctoral degree may be earned in special education. In general, the requirements are the same as those listed in this **Bulletin** (See Doctoral Degree Requirements). Candidates, however, must have at least three years experience in an appropriate area of work with exceptional populations.

The doctoral program is comprehensive and places emphasis on teacher education, administration, research, and community services. Individual programs are based upon experience and background, and information gathered from written and oral qualifying examinations. Details on this program may be secured from the Department of Special Education, Southern Station, Box 115.

COURSE DESCRIPTIONS (SPE – 190)

G-441–**Physiology and Hygiene of the Eye.** Four hours. Fall.

Identification, function, and care of the eye as it relates to the visually handicapped.

G-442–**Methods and Materials in Teaching Visually Handicapped.** Four hours. Winter.

A study of practices commonly used in educational programs including Braille, space orientation, special materials, and organization.

G-450–**Psychology and Education of the Mentally Retarded.** Four hours. Fall, Summer.

A study of the social, emotional, physical, and intellectual characteristics of the mentally retarded; methods of diagnosis and differentiation; special class organization.

G-453—**Learning Disabilities.** Four hours. Fall, Winter, Summer.

A study of the social, emotional, physical, and intellectual characteristics of the perceptually handicapped; methods of diagnosis and differentiation; and special class organization.

G-455—**Speech and Hearing Problems for the Classroom Teacher.** Four hours. Winter, Summer.

This course is designed to familiarize the public school classroom teacher and the education major with speech and hearing problems often found in the public school classroom.

G-460—**Methods and Materials for Teaching the Mentally Retarded.** Four hours. Winter, Spring, Summer.

A study of methods and materials most useful in teaching the mentally handicapped.

G-461—**Psychology and Education of the Physically Handicapped.** Four hours. Winter.

A study of major handicapping conditions, adaptations, social, emotional, and intellectual considerations.

G-462—**Curriculum for the Physically Handicapped.** Four hours. Spring.

A study of educational programs for the physically handicapped.

G-465—**Methods and Materials for Teaching Learning Disabilities.** Four hours. Winter, Spring, Summer.

A study of methods and materials most useful in teaching children with learning disabilities. A variety of media and methods will be emphasized to meet the needs of this exceptionality.

G-470—**Curriculum Adaptations for Teaching Handicapped Youth.** Four hours. Winter, Spring.

Examination of the educational needs of mentally, physically, and emotionally handicapped youth of secondary school age and methods of meeting these needs. Emphasizes the principles and procedures of the cooperative Special Education-Vocational Rehabilitation program.

G-486—**The Psychology and Education of the Exceptional Child.** Four hours. Every quarter.

Considers the psychological and educational needs of children in the typical groups; physically, visually, or auditorially handicapped; defective speech, mentally retarded, emotionally disturbed, socially maladjusted, and the gifted.

G-487—**Problems in Special Education.** Four hours. Fall, Spring.

Organization and administration at both state and local level of the education of the exceptional child.

G-490—**Workshops in Special Education.** Four and one-half hours. Summer.

Workshops in selected areas of special education.

G-495—**Psycho-Educational Evaluation of Exceptional Children.** Four hours.

Prerequisite: PSY 201. Required of special education majors.

Basic principles underlying measurement and evaluation in education with emphasis on interpretation as it relates to exceptional children.

500—**Seminar in Special Education: Research Applications.** Four hours. Winter.

Considers recent research and its application to the various areas of special education.

505—**The Psychology and Education of the Emotionally Disturbed.** Four hours. Fall, Summer.

This course explores the characteristics of deviant behavior, causation, and observation of the emotionally disturbed.

506—**Problems and Methodologies for the Socially Maladjusted.** Four hours. Winter, Summer.

This course explores educational programs for the disadvantaged, delinquent, migrant, and other socially deviant groups; and the application of specific methods and curricula to such program.

508—**Basic Curriculum for the Emotionally Disturbed.** Four hours. Spring, Summer.

A course investigating programs, methods, and materials in the education of the emotionally disturbed child; the role of the teacher in relation to a team of specialists; use of resources, records, and reports.

513—**Issues in Extreme Learning Disabilities.** Four hours. Winter, Summer.

A theoretical and philosophical study of concepts related to neurological factors, dyslexia, and the autistic in learning disorders.

580—**Advanced Practicum in Special Education.** Six to twelve hours.

Supervised diagnostic teaching for advanced students in exceptional children.

587—**Administration and Supervision of Program for Exceptional Children.** Four hours. Spring.

This course is designed for public school administrators and supervisors of

programs for exceptional children. It will provide information concerning the organization and administration of programs for exceptional children. The availability of resources and resource personnel for these programs on the school and the community.

591—**Research in Special Education.** One to twelve hours.

592—**Special Problems I, II.** Two hours each.

Examination of medical, sociological, biological, psychological, and institutional aspects of exceptional children.

594—**Field Problems.** Four hours.

595—**Advance Psycho-Educational Evaluation of Exceptional Children.** Four hours. Fall, Spring, Summer.

Interpretation and application of measurements for exceptional children with emphasis on curriculum decision making.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.**

625—**Advanced Curriculum Studies for the Mentally Retarded.** Four hours. Winter.

Study of different approaches to curriculum development, with emphasis on basic philosophy and goals of teaching mentally retarded.

692—**Reading and Research in Special Education I, II, III, IV.** One hour each. On demand.

694—**Advanced Seminar in Special Education I, II.** Two hours each. On demand.

Problems of diagnosis, treatment, critically reviewing the literature, and designing and conducting research on exceptional children are considered.

696—**Field Problems in the Administration of Special Education.** One to six hours credit. On demand.

Students participate in the activities of an organization involved in administering or teaching special education. This may be at the state or local level, and the student gains supervised experience in an organized program.

735—**Advanced Study of Problems and Issues in Special Education.** Four hours. May be repeated for credit. On demand.

Study of special problems and issues such as philosophy, law, administration, implementation of programs, etc.

791—**Research in Special Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

796—**Practicum in Case Work and Guidance of the Exceptional Child.** Two to eight hours. On demand.

Individual cases are tested by students and all available information is integrated for diagnostic and educational purposes.

797—**Independent Study and Research.** Hour arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

COLLEGE OF LIBERAL ARTS

Claude E. Fike, Dean

The College of Liberal Arts offers the Doctor of Philosophy degree in communication, English, history, political science, and speech and hearing sciences.

The Master of Arts and Master of Science degrees are offered in communication, English, foreign languages, linguistics, geography, history, philosophy, political science, social science (with several departments cooperating), sociology, and speech and hearing sciences.

With the approval of the major professor and the chairman of the major department, the student may choose a graduate minor from any of the above-listed fields. A student in the College of Liberal Arts may also choose a graduate minor in education or psychology from the College of Education and Psychology, or in economics from the School of Business Administration, always subject to the approval of the major professor and the chairman of the major department.

Various departments of the College of Liberal Arts also participate with the College of Education and Psychology in programs leading to the Master of Education degree.

Since the master's degree in social sciences is normally intended for teachers, students interested in this degree should consult the Dean of the College of Liberal Arts and the Dean of the College of Education and Psychology, who will jointly arrange suitable degree programs with the appropriate chairmen.

For general academic requirements and regulations governing each of these degree programs, see Part IV of this **Bulletin.**

For **specific** degree requirements of each department, consult the appropriate department in Part V of this **Bulletin.**

DEPARTMENT OF COMMUNICATION

Stanford P. Gwin, Chairman

Bishop George Gregory Lacy Pittman Tucker Willis Wilson

The Department of Communication offers the Master of Arts or Master of Science degree in the two graduate major areas of public address and communication. The Doctor of Philosophy degree is offered in communication. Master's degree programs consist of a minimum of forty-six (46) quarter hours, half of which must be numbered 500 or above, excluding thesis credits. A suitable outside minor of sixteen (16) quarter hours, if elected, may be included in this total.

While a thesis is recommended for either master's degree, the non-thesis plan may be elected with the approval of the major professor and department chairman. Ordinarily, the non-thesis plan is appropriate for candidates with substantial professional media experience. Master of Arts degree candidates must demonstrate proficiency in one foreign language and elect the thesis plan. Proficiency in statistics is desirable in both plans.

Candidates for the doctoral degree in communication are required to demonstrate proficiency in one foreign language and in statistics. Graduate credit hours earned in foreign language and statistics do not count toward the minimal credit hour requirement of seventy-two (72) quarter hours beyond the master's or 118 hours beyond the baccalaureate degree. Three consecutives quarters of twelve (12) hours each are necessary to meet the residence requirement.

Doctoral candidates must elect an outside minor to be approved by the major professor and the graduate faculty of the Department of Communication.

While the doctoral candidate may emphasize print, radio-television-film media, public address, media management, or public relations in his program, he must study research and methodology in accordance with the departmental philosophy.

With the advice and approval of the major professor and the graduate faculty, the public address oriented candidate will elect course work from all of the areas of the Department. Communication majors are required to study in journalism, radio-television-film, and public address, in addition to those courses classified as Communication (COM).

COURSE DESCRIPTIONS

COMMUNICATION (COM – 208)

G-430—Business and Industrial Communication. Four hours.

G-447—Theories of Mass Communication. Four hours.

G-451—Source Credibility and Public Image. Four hours.

530—Problems in Business and Industrial Communication. Four hours.

544—Modern Theories of Meaning. Four hours.

545—Process and Effects of Communication. Four hours.

568—Social Dissemination of Information and Innovation. Four hours.

570—Communication Seminar. Four hours. May be repeated once.

591—Research in Communication. One to twelve hours.

592—Special Problems. Four hours.

597—Independent Study and Research. Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis in Public Address or Communication.** Ten hours.

600—**Introduction to Graduate Research in Communication.** Four hours.

610—**Content Analysis of Communication.** Four hours.

620—**Design and Administration of Communication Field Studies.** Four hours.

623—**Communication Models.** Four hours.

627—**Comparative International Communication Systems.** Four hours.

710—**Technological Developments in Mass Communication.** Four hours.

712—**Seminar in Mass Media Control and Ethics.** Four hours.

791—**Research in Communication.** One to twelve hours.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Non-credit.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and counseling with the major professor or making use of the library or other Univeristy facilities must enroll in this course.

798—**Dissertation.**

PUBLIC ADDRESS (PA – 216)

G-432—**Symbolic Function in Persuasion.** Four hours.

G-438—**Theories of Speech Behavior.** Four hours.

Study of interrelationships of communication theory and psychology, linguistics, computer analysis, and information theory.

G-453—**Political Campaign Rhetoric.** Four hours.

575—**History and Criticism of American Public Address.** Four hours.

JOURNALISM (JOU – 212)

G-421—**Public Relations.** Four hours.

G-422—**Publicity Methods.** Four hours.

G-423—**Public Relations Practices.** Four hours.

G-431—**Business and Professional Publications.** Four hours.

G-443—**Supervision of High School Publications.** Four hours.

Designed to prepare high school teachers to direct the production of high school newspapers and yearbooks.

G-455—**Newspaper Organization and Management.** Four hours.

G-456—**Public and Press Relations Management.** Four hours.

RADIO-TELEVISION-FILM (RTF – 220)

G-424—**Radio and TV Law.** Four hours.

G-426—**Radio Station Management.** Four hours.

G-445—**Audience Analysis.** Four hours.

G-492—**Special Problems in Radio and Television.** Four hours.

DEPARTMENT OF ENGLISH (ENG – 224)

William D. Norwood, Jr., Chairman

Howard Bahr, Director of Graduate Studies

H. Anderson J. Anderson M. C. Brown Cochran Everett
R. S. Johnson Kay McCartney McCraw C. Moorman
Orange Pierle P. Prenshaw J. Smith Tharpe
L. Thrash Tjarks G. Weaver

The Department of English offers programs leading to the Doctor of Philosophy, Master of Philosophy, Master of Arts, Master of Science, and Master of Education degrees. General academic requirements for all graduate degrees are set forth in Part IV of this **Bulletin**. Specific departmental requirements for each degree are stated in information sheets obtainable at the English Office, College Hall 210.

COURSE DESCRIPTIONS (ENG – 224)

G-406—**History of the English Language.** Four hours.

G-408—**Introduction to Linguistics.** Four hours.

G-414—**The American Literary Renaissance, 1820-1870.** Four hours.

G-416—**The Rise of Realism in American Literature, 1870-1920.** Four hours.

G-418—**The American Novel, 1920-1960.** Four hours.

G-419—**Modern American Poetry.** Four hours.

G-420—**American Drama.** Four hours.

G-423—**Shakespeare's Comedies and Tragicomedies.** Four hours.

G-425—**Shakespeare's Histories and Tragedies.** Four hours.

G-427—**The British Novel.** Four hours.

G-429—**Sixteenth Century British Literature.** Four hours.

G-430—**Studies in Comparative Literature.** Four hours. May be repeated for credit as topics vary for a total of twelve hours.

G-431—**Studies in British Literature.** Four hours. May be repeated for credit as topics vary for a total of twelve hours.

G-432—**Studies in American Literature.** Four hours. May be repeated for credit as topics vary for a total of twelve hours.

G-433—**Advanced Grammar.** Four hours.

G-434—**English Syntax.** Four hours. An examination of analytical methods, including generative transformations.

G-435—**Nineteenth Century British Literature: Romantic.** Four hours.

G-436—**Nineteenth Century British Literature: Victorian.** Four hours.

G-437—**Studies in Linguistics.** Four hours. May be repeated as topic varies for credit to a total of twelve hours.

G-438—**Short Story Writing.** Four hours.

G-439—**Poetry Writing.** Four hours.

G-440—**Traditions and Forms.** Four hours.

G-443—**Readings in World Literature I.** Four hours.

G-444—**Readings in World Literature II.** Four hours.

G-446—**Readings in World Literature III.** Four hours.

G-447—**Major Writers of the Eighteenth Century.** Four hours.

G-453—**Medieval English Literature.** Four hours.

G-466—**Twentieth Century British Literature.** Four hours.

G-473—**Analysis of Poetry.** Four hours.

G-474—**The Modern European Novel.** Four hours.

G-480—**Modern European Poetry.** Four hours.

G-483—**Modern Drama.** Four hours.

G-485—**Literature of the South.** Four hours.

G-486—**Seventeenth-Century Prose and Poetry.** Four hours.

G-487—**Milton.** Four hours.

G-488—**Chaucer.** Four hours.

G-490—**Proseminar in Poetics.** Four hours.

500—**Bibliography and Methods of Research in English.** Four hours.

502—**Anglo-Saxon.** Four hours.

503—**The Development of Modern English.** Four hours.
Prerequisite: English 434-G434 or permission of instructor.

504—**Middle English.** Four hours.

505—**Seminar in American Literature.** Four hours.

506—**Beowulf.** Four hours.

508—**Seminar in Non-Dramatic Renaissance Literature.** Four hours.

510—**Seminar in Pope and His Contemporaries.** Four hours.

511—**Seminar in English Romaticism.** Four hours. May be repeated as topic varies to a total of eight hours.

513—**Seminar in Medieval Epic and Romantic Literature.** Four hours.

515—**Seminar in Modern Poetry.** Four hours. May be repeated as topic varies to a total of eight hours.

518—**Seminar in Seventeenth Century British Literature.** Four hours. May be repeated as topic varies to a total of eigh hours.

520—**Seminar in Analysis of Linguistic Structure.** Four hours.

Prerequisites: ENG 408-G-408 or permission of instructor.

538—**Advanced Creative Writing.** Four hours.

539—**Seminar in Literary Principles and Processes.** Four hours.

580, 581—**Tutorial in English and Germanic Philology I, II.** Eight hours. 4-4.

592—**Special Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

605—**Seminar in American Literature Before 1900.** Four hours. May be repeated as topic varies to a total of eight hours.

607—**Seminar in American Literature After 1900.** Four hours. May be repeated as topic varies to a total of eight hours.

608—**Seminar in Renaissance Drama.** Four hours.

610—**Seminar in Johnson and His Contemporaries.** Four hours.

611—**Seminar in Victorianism.** Four hours.

613—**Seminar in Medieval Poetry and Drama.** Four hours.

615—**Seminar in Modern Fiction and Drama.** Four hours. May be repeated as topic varies to a total of eight hours.

620—**Readings in Linguistics.** Four hours.

622—**Special Studies in Linguistics.** Four hours.

791—**Research in English.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF FOREIGN LANGUAGES

Roger Johnson, Jr., Chairman

Craddock Neumann Scheel Trail

Candidates may study toward the attainment of either the Master of Arts or the Master of Science degree in French, German, or Spanish. Applicants for admission to the graduate program in this Department should be able to demonstrate advanced undergraduate knowledge of an appropriate foreign language. Those intending to emphasize literature should have already engaged in systematic study of the literature of some linguistic area. Each degree program requires at least forty-six (46) hours of graduate credit, twenty-four (24) hours of which is numbered 500 or above. If a minor is elected, it consists of sixteen (16) hours of course work. Courses to be counted toward a major are drawn from the student's chosen language area; or, with concurrence of the student's adviser, the courses may be drawn from the group listed as Foreign Languages (FL). On special advisement a course in comparative literature may be counted toward the major.

The Master of Arts degree specifically requires proficiency in a second foreign language and the satisfactory completion of a thesis. No minor is necessary. The Master of Science degree requires a minor, but no thesis and no second foreign language. It is intended primarily for secondary school teachers and for those who do not plan to study toward a more advanced degree.

COURSE DESCRIPTIONS

FOREIGN LANGUAGES (FL – 228)

G-401—**Introduction to the Advanced Study of Foreign Literature.** Four hours.

Prerequisite: Intermediate knowledge of a foreign language or consent of instructor.

G-412—**Advanced Credit for Study Abroad.** Four to twelve hours.

Prerequisite: Advanced knowledge of the language to be studied; prior arrangements for evaluation and receipt of credit.

Credit will be granted for systematic study of the language and culture or the language and literature of a foreign area. Study must be under the direction of a recognized teaching institution approved in advance by the Department of Foreign Languages. The Department will examine and grade the progress and achievement of all participants in this program before granting credit.

G-420—**Translation.** Four hours.

Prerequisite: Bilingualism in languages approved by the instructor.

May be taken for a total of twelve hours.

A practicum in oral and written translation.

G-452—**Advanced Methods of Teaching Foreign Languages.** Four hours.

Prerequisite: Intermediate knowledge of a foreign language and consent of instructor.

Theory and directed practice in teaching a foreign language.

592—**Advanced Studies.** Four hours.

May be taken for a total of sixteen hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

FRENCH (FRE – 236)

G-411—**Proseminar in Literary Genres.** Four hours. May be taken for a total of sixteen hours.

Prerequisite: Consent of instructor.

561—**Introduction to Old French.** Four hours.

562—**Seminar in Literary Periods.** Four hours. May be taken for a total of twenty hours.

563—**Seminar in Literary Topics.** Four hours. May be taken for a total of twenty hours.

GERMAN (GER – 240)

G-411—**Proseminar in Literary Genres.** Four hours. May be taken for a total of sixteen hours.

561—**Introduction to Middle High German.** Four hours.

562—**Seminar in Literary Periods.** Four hours. May be taken for a total of twenty hours.

563—**Seminar in Literary Topics.** Four hours. May be taken for a total of twenty hours.

SPANISH (SPA – 264)

G-411—**Proseminar in Literary Genres.** Four hours. May be taken for a total of sixteen hours.

Prerequisite: Consent of instructor.

561—**Introduction to Old Spanish.** Four hours.

562—**Seminar in Literary Periods.** Four hours. May be taken for a total of twenty hours.

563—**Seminar in Literary Topics.** Four hours. May be taken for a total of twenty hours.

CURRICULUM IN COMPARATIVE LITERATURE

Guy T. Trail, Director

The curriculum in comparative literature offers a program of study leading to the Master of Arts degree. Entering students should have working knowledge of two languages, one of which may be English. During the course of study, proficiency in foreign languages and minor areas will be increased; therefore, it is not expected that beginning students be expert in all facets of their proposed curricula. The aim of the curriculum is to prepare students to deal intelligently and originally with any literary document and with any problem related to belles lettres.

Requirements for graduation include successful completion of the following:

1. Forty-eight (48) hours graduate credit, half of which is numbered 500 or above, to include:
   a. Sixteen (16) hours in the literature of one language, ancient or modern, including English.
   b. Ten hours of thesis. (Exceptions to this requirement may, under certain circumstances, be approved by the Director of the Curriculum.)
   c. Twenty-two (22) hours in comparative literature and in approved related disciplines (e.g. the literature of another language, art, music, philosophy, history, linguistics, and others with special approval.)
2. An examination covering the student's specific course of study.

COURSE DESCRIPTIONS (CLT – 230)

501–**Introduction to Comparative Literature.** Four hours.

Prerequisite: Consent of instructor.

550–**Comparatist History of World Literature.** Four hours. May be repeated for a total of sixteen hours credit when topics vary.

Prerequisite: Consent of instructor.

560–**Principles of Comparatist Interpretation.** Four hours. May be repeated for a total of sixteen hours when topics vary.

Prerequisite: Consent of instructor.

Applications of the comparatist approach of interdisciplinary studies involving the qualities and functions of literature.

592–**Advanced Studies in Comparative Literature.** Credit arranged, two to six hours.

597–**Independent Study and Research.** Hour arranged.

Not to be counted as credit toward a degree.
Student who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598–**Thesis.** Ten hours.

DEPARTMENT OF GEOGRAPHY (GHY – 268)

Arthell Kelley, Acting Chairman

Davidson McCutchen McKee

The Department of Geography participates in programs leading to the Master of Arts and the Master of Science degrees. For the Master of Arts degree the student must complete forty-six (46) hours in the Department of Geography, write an acceptable thesis, and have a reading knowledge of one foreign language. A minor for the Master of Arts degree is optional. For the Master of Science degree the student must take forty-eight (48) hours, thirty-two (32) in geography and sixteen (16) in an outside minor.

COURSE DESCRIPTIONS (GHY – 268)

G-410–**Geography of the United States and Canada.** Four hours.

A regional study of Anglo-America covering people, resources, products, trade, and world relation.

G-412—**Aerial Photography Interpretation.** Four hours.

G-418—**Geography of South America.** Four hours.

G-420—**Geography of the Caribbean Countries.** Four hours.

G-431—**Geography of the South.** Four hours.

G-433—**Geography of Southwest Asia.** Four hours.

G-437—**Geography of the U.S.S.R.** Four hours.

A regional survey of the physical, economic, and cultural geography of the U.S.S.R.

G-438—**Geography of Europe.** Four hours.

G-439—**Geography of Monsoon Asia.** Four hours.

A regional study, with emphasis on India, China, Japan, and Indonesia.

G-440—**Geography of Africa.** Four hours.

G-441—**Geography of Australia and Pacific Islands.** Four hours.

G-445—**Industrial and Commercial Geography.** Four hours.

Includes a short survey of geographic principles governing secondary and tertiary production.

G-450—**Physiography of North America.** Four hours.

Prerequisites; GLY 101 and 103 or consent of instructor.

A study of the character of the physiographic provinces of North America.

G-460—**Historical Geography.** Four hours.

A study of how geography has influence American history, exploration, settlement, and political, industrial, and social development.

G-480—**Climatology.** Four hours.

A detailed study of types of world climates. Reference made to distribution of patterns of vegetation, soil, and population resulting from climates.

G-484—**Urban Geography.** Four hours.

Nature, distribution, principal functions of urban settlements and supporting areas with emphasis on the United States and local field study.

G-485—**Field Geography.** Four hours.

A study of the techniques of reconnaissance and detailed field work, including classification of natural and cultural features and preparation of reports and maps based on field data. Instruction will cover the use of the compass and hand level, the plane table, and aerial photographs in field mapping.

G-486—**Urban Field Methods.** Four hours.

501—**General Seminar.** One hour.

504—**Primary Production.** Four hours.

506—**Secondary Production.** Four hours.

508—**Tertiary Production.** Four hours.

510—**Advanced Cartography.** Four hours.

512—**Photogrammetry.** Four hours.

514—**Advanced Climatology.** Four hours.

516—**Landforms.** Four hours.

518—**Geography of Soils.** Four hours.

520—**Theory of Regions.** Four hours.

522—**Quantitative Methods of Area Analysis.** Four hours.

540—**History and Development of Geographic Thought.** Four hours.

550—**Seminar in Western Hemisphere.** Four hours.

554—**Seminar in Eastern Hemisphere.** Four hours.

571—**Seminar in Political Geography.** Four hours.

572—**Seminar in Historical Geography.** Four hours.

574—**Seminar in Urban Geography.** Four hours.

591—**Problems in Geography.** Four hours.

592—**Problems in Geogrpahy.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

DEPARTMENT OF HISTORY (HIS – 272)

John Ray Skates, Chairman

Anglin	Bowers	R. Brent	Ciccarelli	J. T. Davis
Fike	Gonzales	Guice	Harper	McCarty
	McMillen	Scarborough	von Wahlde	

The Department of History participates in programs leading to the degrees of Master of Arts, Master of Science, and Doctor of Philosophy.

General Regulations: The student is held responsible for following all graduate regulations. The student's major professor will help in any way possible, but the student is expected to know what is required and to take full responsibility. The procedure is explained fully in Part IV of this **Bulletin.**

MASTER'S DEGREES

Admission Requirement

Regular: This Department requires of all entering students a minimum grade point average of 2.75 and a combined score of 750 on the aptitude phase of the Graduate Record Examinations.

Conditional: A student who does not meet the minimum admission requirements may be admitted on a conditional basis in one of two ways: (1) He must present a score of 750 or above on the aptitude section of the GRE and a grade point average no lower than 2.5; (2) He must present a grade point average of 2.75 or above if he has scored lower than 750 on the aptitude sections of the GRE.

Requirements for Master of Arts

All students are expected to complete the following requirements:

1. A total of forty-six (46) quarter hours in history with fifty percent of work in courses on the 500 level.
2. History 504 or 506 (depending on his major field) at its first offering by the Department.
3. A reading knowledge of one foreign language.

4. With the approval of the major professor the student can optionally take a sixteen (16) hour minor within the minimum hourly requirements.
5. A thesis, which will confer ten hours credit within the minimum hourly requirements.
6. After satisfactory completion of the course work and the thesis, the student will take a comprehensive oral examination, which will be given at stated times throughout the year, usually during the seventh week of a quarter. Comprehensive examination must be arranged when the candidate's major professor is present. It is understood that the candidate for the Master of Arts degree must pass all fields in the comprehensive examination. To this end the following procedure will govern examinations:

   If a candidate fails to satisfy his major professor, he is deemed to have failed and must retake the entire examination. If he fails to satisfy one minor professor, he automatically receives a conditional pass and must satisfy that professor of his proficiency in that field within six months or he will be required to retake the entire examination. If the candidate is re-examined, his overall proficiency will be determined by a majority vote of the committee, provided the major professor votes with the majority.

Requirements for Master of Science

All students are expected to complete the following requirements:

1. A total of forty-eight (48) quarter hours with fifty percent of work in courses on the 500 level.
2. An outside minor of sixteen (16) hours.
3. History 504 or 506 (depending on his major field) at its first offering by the Department.
4. A thesis (optional).
5. After satisfactory completion of the course work, the student will take a comprehensive oral examination, which will be given at stated times throughout the year, usually during the seventh week of a quarter. Comprehensive examination must be arranged when the candidate's major professor is present. It is understood that the candidate for the Master of Science degree must pass all fields in the comprehensive examination. To this end the following procedure will govern examinations:

   If a candidate fails to satisfy his major professor, he is deemed to have failed and must retake the entire examination. If he fails to satisfy one minor professor, he automatically receives a conditional pass and must satisfy that professor of his proficiency in that field within six months or he will be required to retake the entire examination. If the candidate is re-examined, his overall proficiency will be determined by a majority vote of the committee, provided the major professor votes with the majority.

Fields The Department of History presently offers the following fields for the Master of Arts and Master of Science degrees:

1. U. S. History to 1789
2. U. S. History, 1789-1848
3. U. S. History, 1848-1900
4. U. S. in the 20th Century
5. Medieval History
6. Latin America
7. Russia to 1917
8. Russia Since 1917
9. Britain, 1485-1760
10. Britain, 1760 - Present
11. Europe, 1789-1870
12. Europe, 1870-1919
13. Europe, 1919 - Present
14. A specialized field which might include the Far East, the Middle East, Africa, etc.

2. The Master of Arts candidate must demonstrate proficiency in the field of his thesis, plus one field in U. S. history and one in a non- U.S. field.

3. The Master of Science degree requires proficiency in three fields of history and the outside minor. The history fields offered must include at least one U.S. and one non- U.S. field.

DOCTORAL PROGRAM

Admission Requirements

The Department requires a minimum grade point average of 3.5 on all graduate work and a combined score of 900 on the aptitude phase of the Graduate Record Examinations. Exceptions to these requirements may be made of those students who have received Master of Arts degrees from the University of Southern Mississippi, provided they receive a GRE score of 800, a unanimous recommendation by their Master of Arts committees, and approval by a majority of the members of this Department. Students so accepted will be classified "conditional," which status is removed by achieving a 3.5 average in twenty-four (24) hours work during the first two quarters.

A minimum of 118 hours of course credit beyond the baccalaureate degree, which includes a minimum of three research seminars -- two in the field of the major and one in the departmental minor – and History 504 and 506, must be attained by all students.

Major and Minor Requirements

The Department offers the Doctor of Philosophy degree in United States History and in European History Since 1789. If a candidate seeks a doctorate in United States History, he must demonstrate proficiency in all of American History. In addition he must demonstrate proficiency in either European History from 1789-1870 or European History from 1870 - Present. He must also demonstrate proficiency in one of the following fields: Medieval, Latin American, British History 1485-1760 or British History 1760 - Present, one of

the European fields not selected above, or a specialized field such as Russian History with the consent of the major professor and the graduate committee. He is required also to develop an outside minor in one of the social sciences or humanities in which he will take sixteen (16) quarter hours of work.

If a candidate majors in the field of European History, he must major in the period of Europe Since 1789. He must demonstrate proficiency in either American History to 1865 or American History Since 1865. He is also required to demonstrate proficiency in one of the following fields: Medieval, Latin American, Britain, 1485-1760 or Britain, 1760 to Present, or a specialized field such as Russian History with the consent of the major professor and graduate committee. In addition, he must establish an outside minor of sixteen (16) quarter hours in any one of the fields of social sciences or humanitites. The outside minor in either case should be decided after consultation with the candidates's major professor and his graduate committee.

Language Requirement

Each prospective candidate for the doctoral degree must demonstrate proficiency in French and in German during his period of residence for the Doctor of Philosophy degree. Upon the recommendation of the major professor and the approval of the graduate committee, some other language may be substituted for either French or German. The first language must be completed before the start of the second year of graduate study, and the second language in the quarter before the general comprehensive examinations are taken.

Doctoral Committee

The student's major professor, who is usually selected in accordance with the preference of the student, will guide the candidate through the early part of his graduate work. Upon admission to candidacy for degree, an advisory committee will be appointed which will direct the work of the student through the completion of requirements for the degree. The committee will be composed of the major professor, who will be chairman, representatives from the student's major and minor fields, and as many other members of the graduate faculty as the Department deems necessary. The committee will be composed of from five to seven members.

Doctoral Examinations

The candidate's major professor and committee will review the candidate's progress and may require the candidate to stand a qualifying examination at the end of the first quarter.

Upon the conclusion of all course work and the satisfactory completion of the language requirements, the candidate is expected to take a written and an oral general examination in the field of his major, his departmental minors, and his outside minor. Again it is understood that candidates for the doctoral degree must pass all fields in their comprehensive examinations. Upon satisfactory completion of the comprehensive examination the candidate shall be admitted by application to candidacy for the degree.

If the candidate fails to satisfy his major professor he is deemed to have failed and must retake the entire examination. If he fails to satisfy one minor professor he automatically receives a conditional pass and must satisfy that professor of his proficiency in that field within six months or he will be required to retake the entire examination. If he fails to satisfy more than one minor professor he is deemed to have failed the entire examination.

If the candidate should fail the general comprehensive examination he will be permitted to apply for re-examination two quarters after such failure. If the candidate is re-examined his overall proficiency will be determined by a 2/3 vote of the committee provided that the major professor votes to pass. A second failure of the general comprehensive examination will render the candidate ineligible for the Doctor of Philosophy in history at this institution.

Dissertation

A dissertation is expected to be a mature and competent piece of writing, embodying the results of significant and original research on a subject chosen by the candidate and approved by the major professor and the graduate committee.

Upon completion and approval of the dissertation, the candidate is expected to stand satisfactorily a final examination on the dissertation and the field in which the dissertation lies.

COURSE DESCRIPTIONS (HIS – 272)

Certain graduate courses taken in other departments may be accepted for credit with the consent of the student's graduate committee.

G-401–**Russia to 1800.** Four hours.

G-402–**Nineteenth Century Russia.** Four hours.

G-403–**Russia Since 1917.** Four hours.

G-404–**Russian Intellectual History.** Four hours.

G-411–**English Constitutional History.** Four hours.

G-413–**Western Intellectual History.** Four hours.

G-418–**History of the Caribbean.** Four hours.

G-419–**History of South America.** Four hours.

G-424–**Medieval World I, Economic and Social History.** Four hours.

G-425–**Medieval World II, Cultural History.** Four hours.

G-430—**Modern Germany.** Four hours.

G-432—**French Revolution and Napoleon.** Four hours.

G-433—**Europe, 1815-1870.** Four hours.

G-434—**Europe, 1870-1918.** Four hours.

G-435—**Europe, 1918-1939.** Four hours.

G-436—**Europe Since 1939.** Four hours.

G-437—**Modern France.** Four hours.

G-439—**Tudor-Stuart Britain.** Four hours.

G-441—**Nineteenth Century Britain.** Four hours.

G-442—**Twentieth Century Britain.** Four hours.

G-445—**The British Commonwealth.** Four hours.

G-448—**The Age of Jefferson.** Four hours.

G-449—**The Age of Jackson.** Four hours.

G-451—**U.S. Intellectural and Social History to 1865.** Four hours.

G-453—**U.S. Intellectual and Social History Since 1865.** Four hours.

G-455—**The Old South.** Four hours.

G-457—**The New South.** Four hours.

G-459—**History of Mexico.** Four hours.

G-469—**United States Constitutional History to 1877.** Four hours.

G-470—**United States Constitutional History Since 1877.** Four hours.

G-475—**United States Foreign Relations to 1914.** Four hours.

G-477—**United States Foreign Relations Since 1914.** Four hours.

G-481—**Colonial America, 1607-1763.** Four hours.

G-482—**Revolutionary Era, 1763-1789.** Four hours.

G-484—**American Political Leaders.** Four hours.

G-487—**The American Frontier.** Four hours.

G-496—**The Sectional Controversy and the Civil War, 1840-1865.** Four hours.

G-497—**Reconstruction and the Emergence of Modern America, 1865-1898.** Four hours.

G-498—**The Progressive Era, World War I, Prosperity and Depression. 1898-1933.** Four hours.

G-499—**The New Deal, World War II, and Post-War America, 1933-Present.** Four hours.

504—**European Historiography.** Four hours.

506—**American Historiography.** Four hours.

510—**Medieval History.** Four hours.

514, 515, 516—**Seminar in European History, 1870 to Present I, II, III.** Four hours each.

520—**Modern Russia.** Four hours.

531—**British History.** Four hours.

540,541—**Reading Seminar in European History I, II.** Four hours each.

553—**Seminar in Southern History.** Four hours.

561—**Seminar in U.S. Diplomatic History.** Four hours.

572—**Seminar in American Colonial and Revolutionary Period.** Four hours.

574—**Seminar in Nineteenth Century U.S.** Four hours.

576—**Seminar in Twentieth Century U.S.** Four hours.

578, 579—**Reading Seminar in American History I, II.** Four hours each.

585—**Latin American History.** Four hours.

592—**Special Problems I, II, III, IV.** One hour each.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

600—**Seminar and Practicum in the Teaching of History in Colleges and Universities.** Four hours.

Required of all Ph.D. candidates and open to select M.A. candidates.

The course will emphasize the following areas: professional ethics, professional organizations, publications, educational philosophy, faculty-student relationships, community relationships. Special consideration will also be given to the mechanics of lecture preparation, testing, and methodology. Concurrently with the seminar the student will be assigned to a professor and will work closely with that professor in preparing lectures, and preparing and grading examinations. He will present a minimum of four supervised lectures.

602—**Internship in the Teaching of History.** Four hours.

Required of all Ph.D. candidates who have had no teaching experiences at the college or university level and optional for those with such experience. Each student will teach under his supervisory professor a section of History 101, 102, 111, or 112.

791—**Research in History.** One to twelve hours.

Prerequisite: Approval of the major professor.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF POLITICAL SCIENCE (PS – 280)

William H. Hatcher, Chairman

Caudill	Doumas	Mobley	Piliawsky
Smith	Tuchak	Virden	Wilber

MASTER'S DEGREE PROGRAM

Master of Arts. Requirements for the Master of Arts degree include: forty-six (46) quarter hours of course work, which includes a thesis, and a sixteen (16) hour minor (optional). A reading knowledge of one foreign language is also required.

Master of Science. Requirements for the Master of Science degree include: forty-six (46) quarter hours of course work, including an outside minor of sixteen (16) hours. A thesis is optional. The Master of Science degree should be considered a terminal degree.

Course Requirements in the Major. Graduate students who expect to receive the Master of Arts degree will select three fields in political science in which to concentrate their course work, Political Theory being one of the three. Graduate students who expect to receive the Master of Science degree will, in addition, select an outside minor, with the advice and consent of their committee.

The fields of political science and the courses in each field are:

Political Theory and Methodology
G-400, G-402, G-404, 500, 511, 512, 545

American Government and Politics
G-406, G-407, G-412, G-414, G-434, G-435, G-436, G-461, 532, 560

International Relations
G-453, G-454, G-457, G-458, G-470, G-472, G-474, G-482, G-483, G-485, 550, 555, 580

Comparative Government and Politics
G-450, G-451, G-452, G-470, G-472, G-474, G-480, 540, 580

Public Administration
G-460, G-462, G-463, G-464, G-481, 560, 561

Public Law
G-412, G-414, G-416, G-485, 520, 525

Comprehensive Examination. A written and oral comprehensive examination will be given at or near the end of the course work on the three fields of concentration and on the minor, if applicable.

Undergraduate Preparation. Before undertaking a graduate major in the Department of Political Science, a student should have at least twelve (12) hours of undergraduate political science. Additional work may be required at the discretion of the student's advisory committee.

Courses Accepted from Other Departments. The following courses will be accepted as political science for purposes of completing a major or minor if approved by the student's adviser:

FIN G-415; ECO G-400; HIS G-411, G-469, G-470, G-475, and G-477.

DOCTORAL PROGRAM

In addition to the general requirements listed above in this **Bulletin**, the Department of Political Science makes the following specific requirements.

Proficiency in two foreign languages is expected. The student must be able to use the first language before beginning doctoral work (the second year of graduate study), and must satisfy the requirement for the second language at least one full quarter prior to the quarter in which the comprehensive examination is taken. A dissertation based on scholarly research in original sources is required.

The qualifying examination (if required) is to be taken during the first quarter of graduate work beyond the master's degree.

Course Requirements in the Major. Doctoral candidates must specialize in four fields of political science and in one outside minor. (The fields and courses are listed under the master's program above.)

Comprehensive Examination. At the end of the course work, and following successful completion of the foreign language requirements, a written and oral comprehensive examination will be taken in the four fields of the major, and, at the student's doctoral committee's discretion, in the minor. Should the student fail the comprehensive examination in one or more fields, a re-examination may be given by the Department following a lapse of two quarters, or when the student has taken sufficient remedial work to warrant re-examination. Should the student fail the second examination, he will not normally be allowed to continue graduate work in the Department.

COURSE DESCRIPTIONS (PS – 280)

G-400–**Political Theory to 1783.** Four hours.

Political thought from Plato through the Enlightenment, with emphasis on the contributions of individual philosophers.

G-402–**American Political Theory.** Four hours.

A study of the principal political ideas that have influenced the development of the United States' political system.

G-404–**Politcal Theory Since 1783.** Four hours.

Recent and contemporary European political thought with emphasis on liberalism, conservatism, socialism, communism, and fascism.

G-406–**American Political Parties and Pressure Groups.** Four hours.

A survey of party structures, problems, and the methods of political leaders. Also a survey of present pressure groups and their methods.

G-407—**Mississippi Government.** Four hours.

G-412—**U. S. Constitutional Law.** Four hours.

A survey, by the case method, of principles and practices of American constitutional law. Emphasis is placed upon judicial review, the federal system, national powers, and individual rights.

G-414—**The Judicial Process.** Four hours.

A study of the judicial system and its relationship to other elements of the political system and to society at large. Judicial functions and procedures are considered with special attention given to the inter-action between the courts and the legislative and executive branches. The focus of the course is on the national courts, but some attention is given to state courts.

G-416—**Comparative Judicial Politics.** Four hours.

Prerequisite: 412 or 414 or consent of the instructor.

A comparative analysis of the political functions of courts of selected countries. Among the features of judicial systems to be studied are judicial selection, judicial role, judicial review, judicial structure and judicial effect.

G-434—**County Government.** Four hours.

A study of local rural government, with some emphasis on Mississippi.

G-435—**Municipal Government.** Four hours.

A study of the principal systems of municipal government in the United States, with emphasis on Mississippi.

G-436—**The Legislative Process.** Four hours.

A detailed study of Congress and the state legislature, covering functions, organization, procedure, outside influences, and problems. Emphasis is on Congress.

G-450—**Governments and Politics of Western Europe.** Four hours.

A study of West Germany, France, and Italy.

G-451—**Soviet Government and Politics.** Four hours.

A detailed study of the political, economic, and social structure of the Soviet Union, and of the role of the Communist Party.

G-452—**British Government and Politics.** Four hours.

G-453—**Soviet Foreign Policy.** Four hours.

A study of Soviet foreign policy with emphasis on the period after World War II.

G-454—**Politics of the World's Power Blocs.** Four hours.

Prerequisite: G-457 or permission of the instructor.

An intensive analysis of the pattern of politics resulting from the formation of the two major power blocs and the developing formation of lesser blocs such as that led by Communist China and the Neutralist bloc, the Common Market bloc, and the Japanese sphere.

G-457—**International Politics.** Four hours.

A survey of the international political process, explaining the principles, forces, actions, techniques, and the nature of the environment encountered in that process. This course also includes a brief analysis of methodology.

G-458—**International Organization.** Four hours.

A study of the principal types of international organization, and of examples of the same, such as the United Nations and the Organization of American States.

G-460—**Public Administration.** Four hours.

An introductory study, including administrative organization, personnel management, and fiscal management.

G-461—**The Presidency.** Four hours.

A study of the executive function in the process of government with special emphasis on the increasing role of the President.

G-462—**Public Personnel Administration.** Four hours.

Includes recruitment, promotion, discipline, control and the removal in both the United States and the states.

G-463—**Organization and Management.** Four hours.

Includes organization planning, program planning, fiscal planning, and administrative reporting.

G-464—**Policy Formulation.** Four hours.

Includes the roles of persons, groups, and governmental and non-governmental institutions.

G-470—**Middle Eastern Governments and Politics.** Four hours.

A study of the states of the contemporary Middle East: governmental structures and institutions, political organizations and behavior, and regional and international relations.

G-472—**Far Eastern Governments and Politics.** Four hours.

A survey of the politics and the governmental systems of the area in general,

and of such states as India, China, Taiwan, Japan, Ceylon, and the Philippines in particular.

G-474—**Tropical African Governments and Politics.** Four hours.

A survey study of the political systems of the "emerging" states of the dark continent and the politics thereof, with special emphasis on industrialization and on socio-cultural background.

G-480—**Latin American Governments and Politics.** Four hours.

A study of governmental and political process in the Latin American member nations of the Organization of American States.

G-481—**Public Administration in Latin America.** Four hours.

A study of public administration in Latin America: strengths, weaknesses, underlying factors, and effect on pursuit of goals.

G-482—**Inter-American Politics.** Four hours.

A study of hemisphere relations, with emphasis on the United States and Latin America, bilaterally and multilaterally.

G-483—**Latin American Political Integration and Development.** Four hours.

A study of the theory of and progress toward Latin American political integration and development through agreements, organizations, and assistance programs.

G-485—**International Law.** Four hours.

A sampling of the field, based largely on cases.

500—**Scope and Methods.** Four hours.

A survey of the scope of political science and of the tools and methods utilized in the discipline.

511—**Seminar in Political Theory.** Four hours.

Prerequisite: Another course in political theory or consent of the instructor.

A research-type course in which each student will make an intensive study of one or more areas of political theory, or of one or more great writers on political theory.

512—**Problems in Political Theory.** Four hours.

Prerequisite: PS 511 or consent of the instructor.

A seminar devoted to a select number of central problems, which will vary from year to year.

520—**Seminar in U. S. Constitutional Law.** Four hours.

Prerequisite: Another course in constitutional law, a course in U.S. constitutional history, or consent of the instructor.

A research-type course in which each student will make an intensive study of one or more fields of U.S. Constitutional Law.

525—**Seminar in Public Law.** Four hours.

Prerequisite: A course in constitutional law or permission of the instructor.

A research course in which the students examine in depth various aspects of the judicial system and its relationship to other elements in the political process.

532—**Seminar in U.S. Government.** Four hours. May be taken twice for credit.

Prerequisite: Course in American national, state, and local government or consent of instructor.

An advanced course in the United States Government, including state and local levels.

540—**Seminar in Comparative Government and Politics.** Four hours. May be taken twice for credit.

Prerequisite: One or more courses in comparative government or consent of the instructor.

A research-type course in which each student will make an intensive study of the political institutions of one country, or of a group of countries having similar governments.

545—**Communist Ideology.** Four hours.

A critical study of materials from the basic writings of Communist thinkers: Marx, Lenin, Stalin, and Mao, with attention to modification made from period to period.

550—**Seminar in U. S. Foreign Relations.** Four hours.

Prerequisite: Another course in U. S. foreign policy or history of U.S. foreign policy or consent of the instructor.

A survey of current United States foreign policies and problems.

555—**Seminar in International Relations.** Four hours. May be taken twice for credit.

An intensive survey and analysis of the methodology, literature, and substance of the process of trans-state politics.

560—**Regulatory Commissions.** Four hours.

A study of the independent regulatory commissions in the context of separation of powers. The analysis will include the policies of the commissions,

and the constitutionality of delegation of legislative power.

561—**The Administrative Process.** Four hours.

A study of the Bureaucracy as a part of American Government with special emphasis on the role of the expert in modern administration. Restricted to old line Departments. Covers chain of command and the problem of control of administrative discretion.

580—**Seminar in Latin America.** Four hours. May be taken twice for credit.

Prerequisite: Two Latin American political science or history courses at the 400 level or consent of the instructor.

A research type course in which each student will make an intensive inquiry into a field such as those described in PS 480 or 483, or in Latin American nationalism—regionalism—hemisphereism, or in a special project.

591—**Research in Political Science.** One to twelve hours.

592—**Special Problems I, II, III.** One hour each.

The student works individually on a paper in political science under the supervision of a graduate faculty member.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

791—**Research in Political Science.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF RELIGION (REL – 288) AND PHILOSOPHY (PHI – 284)

Forrest E. Wood, Jr., Acting Chairman

Atkinson Hales Nau Sullivan

The Department of Religion and Philosophy participates in programs leading to a Master of Arts degree in philosophy and a graduate minor in philosophy and/or a graduate minor in religion and philosophy.

The requirements for the Master of Arts degree in philosophy are as follows:

1. A minimum of forty-six (46) quarter hours of graduate work, twenty-four (24) quarter hours of which must be in courses numbered 500 or above, which includes ten (10) quarter hours in a thesis.
2. Students whose undergraduate preparation is adjudged inadequate may be required to make up their deficiences by taking undergraduate courses without credit. Specifically, students whose undergraduate program does not include the History of Philosophy and Elementary Logic will be required to enroll in those courses without receiving credit.
3. All students must pass a proficiency test in one foreign language, preferably modern; also Greek or Latin will be accepted.
4. A thesis and an oral defense of it are required.
5. Oral and written examinations, comprehensive and otherwise, may be required as determined by the chairman of the department and the student's advisory committee.

The requirements for the minor programs are as follows:

1. To complete a graduate minor in philosophy, a total of sixteen (16) quarter hours of graduate work is required.
2. To complete a graduate minor in religion and philosophy, a total of sixteen (16) quarter hours of graduate work is required with eight (8) quarter hours in each subject.

COURSE DESCRIPTIONS

PHILOSOPHY (PHI – 284)

G-405--**German Idealism.** Four hours.

A critical study of modern German idealism from its origins in Kant through its development in Fichte, Schelling, and Hegel to late nineteenth and early twentieth century idealists.

G-412--**Philosophy of Politics.** Four hours.

A study of fundamental political concepts including law, government, sovereignty and state, and the relation of man's understanding of his own nature to the structuring of such concepts.

G-420–**Introduction to the Philosophy of Science.** Four hours.

Prerequisites: 8 hours of philosophy or advanced courses in mathematics or the empirical sciences.

A study of the conditions and status of knowledge, perception, measurement, hypothesis, causality, and concept formation based upon recent scienctific and philosophical investigation.

G-430–**Advanced Ethics.** Four hours.

Prerequisite: PHI 370.

A study of rival contemporary theories in general theory of value and ethics. The positions of naturalism, intuitionism, emotivism, and functionalism will be critically compared.

G-442–**American Philosophy.** Four hours.

A consideration of representative modern American thinkers, including Royce, Peirce, James, Meade, and Dewey.

G-446–**Aesthetics.** Four hours.

An analysis of classic philosophical problems and theories of art and beauty from Plato to the present.

G-448–**The Pre-Socratics.** Four hours.

A study of the major schools and problems of the pre-socratic philosophers from Thales to the atomists. Consideration will be given to the intrinsic importance of the contributions of these philosophers to perennial problems in metaphysics and epistemology as well as to the influence of these contributions on the philosophies of Plato and Aristotle.

G-454–**Introduction to Symbolic Logic.** Four hours.

The basic theory and operations of the sentential calculus, quantification, and the logic of relations.

G-460–**Analytic Philosophy.** Four hours.

A study of the historical background and development of the contemporary linguistic approach to philosophical problems based upon the writings of Wittgenstein, Wisdom, Ryle, and Austin.

G-462–**Phenomenology.** Four hours.

Texual study of the philosophy of Edmund Husserl, the founder of phenomenology. Topics such as philosophy as rigorous science, intentionality, and the phenomenological reduction will be given special attention.

520–**Seminar in Metaphysics.** Four hours.

Classical and contemporary metaphysics will be examined. Modern criticism by logicians, analytic philosophers, and philosophers of science will be presented.

524—**Seminar in Cosmology.** Four hours.

A study of philosophical and scientific world views.

525—**Seminar in Modern Philosophy.** Four hours.

A critical investigation of the writings of selected modern and contemporary philosophers.

530—**Seminar in Epistomology.** Four hours.

The problem of knowledge as presented in modern philosophic thought. Topics include the mind-body problem, the neural identity problem, behaviorism, etc.

550—**Plato.** Four hours.

A textual study of the major Platonic dialogues.

560—**Aristotle.** Four hours.

A textual study of Aristotle's philosophical writings.

570—**Kant.** Four hours.

A textual study of Kant's metaphysical, epistemological, and ethical writings.

590—**Special Problems.** Two to four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

RELIGION (REL – 288)

G-401—**History of Christian Culture.** Four hours.

May be elected as history.

A study of the cultural development of Western Europe during the Christian era, with emphasis on religious thought, and on religious aspects of institutions, literature, and art.

G-402—**Religion in the Rise of American Culture.** Four hours.

A study of the origin and development of the major religious groups and of the shifts in religious thought in the United States from colonial times to the present.

G-408—**History of the Christian Church I.** Four hours.

May be elected as history.

A study of the history of the church from the apostolic period through the Renaissance.

G-409—**History of the Christian Church II.** Four hours.

May be elected as history.

A study of the history of the church from the Reformation to the modern era.

G-425—**Studies in the Religious Dimensions of Secular Literature.** Four hours.

An examination of religious issues as expressed in modern plays and novels.

G-450—**Religious Literature and Thought of India.** Four hours.

A study of Hinduism, Buddhism, Jainism, and Sikhism as a part of the culture of India.

G-451—**Religious Literature and Thought of China and Japan.** Four hours.

A study of Confuscian, Taoist, Shinto, and Zen literature and thought.

G-452—**Religious Literature and Thought of Near East.** Four hours.

A study of Jewish, Zoroastrian, and Islamic literature and thought.

G-490—**Contemporary Religious Problems.** Four hours. May be repeated as problem varies to a total of twelve hours.

DEPARTMENT OF SOCIOLOGY (SOC – 292)

Donald R. South, Chairman

Bourgeois Burrus Shoemaker

The Department of Sociology offers a graduate major and graduate minor on the master's degree level. The Department's graduate program provides for the Master of Arts degree in sociology and a sociology minor in the master's and doctor's degree programs of other departments.

General regulations governing admission to the Graduate School, requirements of the College of Liberal Arts, and requirements for admission to candidacy for degree are to be found elsewhere in this **Bulletin.** The graduate student should familiarize himself with these requirements and assume responsibility for their discharge.

The major professor and departmental chairman will work out a program of study with, and for, each student electing to do graduate work in sociology.

If the student is uncertain as to whether he has satisfied undergraduate course prerequisites for any particular course, he should consult the instructor for clarification.

The Master of Arts Program in Sociology

In the major area, the Department of Sociology offers only the Master of Arts degree. General requirements correspond to the requirements of the University and its Graduate School. Policies of admission to the University, admission to the Graduate School, admission to candidacy for degree, and grading standards conform to those laid down by the University.

Requirements for the Master of Arts Degree

Thirty-four (34) quarter hours in sociology (minimum).

Sixteen (16) quarter hours in a minor subject approved by the Sociology Department.

At least half of the hours must be in courses numbered 500 or above.

Reading knowledge of one foreign language (proficiency as determined by Graduate School policy).

A thesis to be approved by the major professor.

A written comprehensive examination.

An oral examination by the student's committee to be based on the thesis, the major, and the minor.

COURSE DESCRIPTIONS (SOC – 292)

G-401–**Population.** Four hours.

A course in population analysis. An introduction to the Science of Demography. Instruction is given in how to compute and interpret vital data. Special attention is given to Mississippi population data.

G-410–**Social Control and Collective Behavior.** Four hours.

A study of principles and techniques by which conformity to the laws and other norms of social units is produced and maintained. Additional emphasis is placed on collective efforts to escape from or redefine social norms.

G-420–**Industrial Sociology.** Four hours.

An advanced sociological study of industrial and business units as social systems in their institutional setting.

G-429–**Juvenile Delinquency.** Four hours.

A study of casues and the nature of juvenile delinquency, the development of the juvenile court, of probation and other rehabilitative programs.

G-430–**Social Foundations of Personality.** Four hours.

A comprehensive treatment of the role of the social group and the cultural heritage in the development and functioning of human personality.

G-450–**Social Institutions.** Four hours.

A detailed study of major American social institutions; their functions, interrelationships, and significant trends.

G-470–**Advanced General Sociology.** Four hours.

An advanced course in general sociology giving expanded treatment to the basic sociological concepts and subject matter areas. A basic course in a graduate program.

G-481–**History of Social Thought.** Four hours.

An introduction to social theory. A survey of men and ideas that have influenced the development of Western civilization.

G-482–**Sociological Theory.** Four hours.

A survey of the growth and development of sociological theory from Comte to the present.

G-485–**Methods of Social Research.** Four hours.

A survey of the basic techniques and methods essential to locating, processing, and presenting research materials.

Courses Exclusively for Graduate Students

501–**Departmental Seminar.** One hour. May be repeated once for a total of two quarter hours.
Required of all graduate majors.

507–**American Community Life.** Four hours.

A study of American community life and its social and cultural patterns.

509–**Seminar in Anthropology.** Four hours.

Individually designed and supervised studies in general anthropology. Seminar discussion on methodology and findings.

530–**Social Control and Social Change.** Four hours.

A study of the forms of social control. Independent research projects are reported to the class for discussion and evaluation.

550–**Social Institutions.** Four hours.

An advanced course in social institutions. A study of the structure and function of the five basic institutions. Each student will select one institution for intensive study.

570—**Seminar in Sociological Theory.** Four hours.

A detailed study of the content and influence of selected major contributors to sociological theory.

580—**Seminar in Demography.** Four hours.

Designed to develop understanding of data and trends in world and national population and to provide basis for assessing demographic implications of social and scientific change.

592—**Special Study Projects in Sociology I, II, III, IV.** Two hours each.

Special projects in reading, survey, or research in sociology. Work will be under direction of the major professor or a member of the graduate faculty. Work will be designed to earn credit in two hour units. Maximum credit is eight hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

Credit will not be recorded in 598 until thesis is accepted by the major professor.

DEPARTMENT OF SPEECH AND HEARING SCIENCES (SHS – 296)

Robert B. Mahaffey, Chairman

Davis DuBard Harris Rhodes Winger

The Department of Speech and Hearing Sciences participates in programs leading to the Master of Arts, Master of Science, Master of Education, and Doctor of Philosophy degrees. Part IV of this **Bulletin** covers the specific requirements for these degrees. At the master's level, specialization is possible in four principal areas: (1) Speech and Hearing Science, (2) Audiology, (3) Speech Pathology, and (4) Language Disorders. The program of study at the doctoral level will usually be planned with specialization in one of three principal areas: (1) Speech and Hearing Science, (2) Audiology, or (3) Speech Pathology.

COURSE DESCRIPTIONS (SHS – 296)

SPEECH AND HEARING SCIENCES

G-402—**Language Development.** Four hours.

The normal acquisition of language.

G-406—**Acoustic Phonetics.** Four hours.

Principles of acoustic theories of speech production.

G-410—**Anatomy, Physiology, and Mechanism of Hearing.** Four hours.

This is a basic and fundamental audiology course open to all students who are interested in the normal anatomy and physiology of the ear and associated areas.

G-412—**Aural Rehabilitation.** Four hours.

Current methods involved in the rehabilitation of the hard of hearing, with emphasis on lipreading, auditory training, hearing aids, and counseling services.

G-440—**Medical Diagnosis and Treatment of Speech and Hearing Pathologies I.** Two hours.

G-441—**Medical Diagnosis and Treatment of Speech and Hearing Pathologies II.** Two hours.

G-442—**Medical Diagnosis nad Treatment of Speech and Hearing Pathologies III.** Two hours.

A three-course sequence dealing with the diagnosis and the medical and surgical treatment of speech and hearing pathologies.

G-443—**Voice Science I.** Four hours.

G-444—**Voice Science II.** Four hours.

A two-course sequence dealing with the various anatomical and neurological systems concerned with the production of speech.

500—**Designs in Research for Speech and Hearing.** Four hours.

Quantitative methods and logic models for scientific study of speech and hearing.

592—**Practicum in Speech and Hearing Science, Audiology, Language Disorders, or Speech Pathology.** Credit arranged.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Ten hours.

600—**Seminars in Speech and Hearing Science.** One to four hours each.

A Acoustic Phonetics
B. Experimental Phonetics

C. Language Development
D. Physiological Mechanisms in Speech and Hearing
E. Psychoacoustics
F. Psychology of Speech
G. Quantitative Methods in Speech and Hearing
H. Semantics
I. Speech Encoding and Decoding
J. Speech Intelligibility

603—**Seminars in Laboratory Research.** One to four hours each.

A. Laboratory in Speech and Hearing Sciences
B. Laboratory in Audiology
C. Laboratory in Speech Pathology
D. Laboratory in Language Disorders.

692—**Individual Study.** Credit arranged.

791—**Research in Speech and Hearing Sciences.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

AUDIOLOGY (AUD)

G-405—**Clinical Audiology I.** Four hours.

Prerequisite: SHS 302 or equivalent.

G-407—**Clinical Audiology II.** Four hours.

Prerequisite: SHS 302 or equivalent.

A two-course sequence dealing with advanced audiometric techniques and clinical procedures.

G-408—**Infant Audiometry.** Four hours.
Prerequisite: Consent of instructor.

A course designed to study the behavior, test procedures, and hearing responses of newborn and young infants.
Practicum required.

G-413—**Pre-School Hard of Hearing and Deaf.** Four hours.

An over-all view of the complex problems facing the hard-of-hearing and deaf child in the home, community, and educational environment.

G-417—**Audiological Instrumentation.** Four hours.

To present to advanced students various electronic systems employed in the study of audiology.

G-425—**Pathologies of the Hearing Mechanism.** Four hours.

A basic and fundamental course in audiology open to students interested in the various pathologies and abnormal functions of the ear and associated areas.

501—**Audiology.** Four hours.

The study of the body of knowledge pertaining to hearing.

602—**Seminars in Audiology.** One to four hours each.

A. Aural Rehabilitation
B. Differential Audiology.
C. Electrophysiologic Audiometry
D. Industrial, Military, and Community Hearing Conservation
E. Measurement of Auditory Reception
F. Non-Organic Hearing Losses
G. Peripheral and Central Hearing Process

LANGUAGE DISORDERS

G-430—**Phonetics for the Acoustically Handicapped.** Four hours.

Techniques for teaching speech to the deaf and those children with unusual hearing problems, including system of orthography and their application for teaching speech and reading to acoustically handicapped children.

G-431—**Language Disorders I: Assessment of Children with Language Disorders.** Four hours.

Problems of assessing children with language disorders, differentiating the aphasic child from the deaf, mentally retarded, autistic, severely emotionally disturbed, or the child who does not develop speech and language because of muscular paralysis.

G-432—**Language Disorders II: Habilitation of the Aphasic Child.** Four hours.

Prerequisites: SHS 430, 431.

Basic problems of the aphasic child and procedures needed for him to acquire use and comprehension of language and speech.

G-433—**Language for the Hard-of-Hearing and Deaf.** Four hours.

Prerequisites: SHS 413 or the consent of the instructor.

Principles of language development for the pre-school and school age hard-of-hearing and deaf child and the child with multiple handicaps.

G-434—**Speech for the Hard-of-Hearing and Deaf.** Two hours.

Prerequisite: SHS 430.

Problems in developing and maintaining intelligible speech in hard-of-hearing and deaf children through the multisensory approach. Attention is given to the speech problems of children with multiple handicaps.

G-435—**Problems in Reading and Related Subjects for the Hard-of-Hearing and Deaf.** Four hours.

Prerequisite: Consent of the instructor.

Problems confronting the deaf in reading. Special attention is given to problems created by the vocabulary of high level abstraction and words of multiple meanings.

G-437—**History, Education, and Guidance for the Deaf.** Two hours.

604—**Seminars in Language Disorders.** One to four hours each.

A. Psychology of the Deaf and Speech Handicapped
B. Problems and Procedures in Evaluating Children

SPEECH PATHOLOGY

G-404—**Stuttering and Related Problems.** Four hours.

Theories and therapeutic procedures evaluated with respect to the problem of stuttering behavior in children and adults.

G-424—**Organic Speech Problems.** Four hours.

The pathologies and therapies for speech and allied language problems associated with the organic disorders of cerebral palsy and cleft palate.

G-428—**Adult Aphasia and Related Problems.** Four hours.

The speech and related problems associated with neurological impairment.

G-438—**Pathology of Speech Mechanism.** Four hours.

Investigation of the various disorders involving the vocal mechanism which can result in and/or be associated with speech problems.

504—**Speech Pathology.** Four hours.

The study of the body of knowledge pertaining to speech pathology.

601—**Seminars in Speech Pathology.** One to four hours each.

A. Aphasia and Related Disorders
B. Articulation Disorders
C. Cerebral Palsy
D. Cleft Palate
E. Clinical Counseling in Speech Pathology
F. Neuropathologies of Speech
G. Stuttering and Related Problems
H. Voice Disorders

COLLEGE OF SCIENCE

Robert T. van Aller, Dean

The College of Science offers the Doctor of Philosophy degree in biology and chemistry.

The Master of Arts degree is offered in the Departments of Biology, Chemistry, Geology, and Mathematics, and the Master of Science degree is offered in these departments plus the Departments of Microbiology, Physics, and Polymer Science.

The Departments of Biology, Geology, Mathematics, and Science Education, in cooperation with the College of Education and Psychology, offer programs leading to the Master of Education degree.

The Doctor of Education degree is offered in cooperation with the College of Education and Psychology by the Departments of Mathematics and Science Education.

For detailed information concerning a department's specific degree program, please refer to that department in the following pages. The student's attention is also directed to Part IV of this **Bulletin** for general Graduate School requirements and regulations.

DEPARTMENT OF BIOLOGY (BIO – 305)

George F. Pessoney, Chairman

Cliburn Fish Fischer Grantham Gunter Lewis Norris
Overstreet Rivas K. Rogers B. Smith J. Thompson Walker

MASTER'S DEGREE PROGRAMS

The Department of Biology participates in programs leading to the Master of Arts, Master of Science, and Master of Education degrees. For these degrees a minimum of forty-six (46) graduate hours is required, sixteen (16) of which should be in a minor area determined by the chairman of the department or the student's major professor. Twenty-four (24) of these hours must be from courses numbered above 500. An acceptable problem in research must be completed by both a written thesis and an oral examination defending the thesis. Within the Department the student may study zoology, botany, and, in conjunction with the Gulf Coast Research Laboratory, marine biology.

The general requirements for the Master of Arts and the Master of Science degrees are found in Part IV of this **Bulletin.**

DOCTORAL PROGRAMS

The Department of Biology offers the Doctor of Philosophy degree with majors in botany, zoology, and, in conjunction with the Gulf Coast Research Laboratory, marine biology. The degree of Doctor of Philosophy is conferred only in recognition of excellence in research and scholarship.

Work at the Gulf Coast Research Laboratory is recognized as resident work.

COURSE DESCRIPTION (BIO – 305)

Graduate courses of the 400 level may also be taken by undergraduate students, but courses above the 400 level are limited to graduate students.

G-400–**Protozoology.** Four hours.

Prerequisites: BIO 101, 102, and 103.
Two theory periods and two 2-hour laboratory periods per week.

Introduction to parasitic and free-living protozoa.

G-401–**Genetics.** Four hours.

Prerequisites: BIO 101, 102, and 103.

Fundamental concepts of heredity including Mendelian principles, cytogenetics, molecular genetics, and population genetics.

G-409–**Introductory Phycology.** Four hours.

Two hours lecture and four hours laboratory per week.

Taxonomy, physiology, and biochemistry of the algae.

G-410–**Introductory Morphology of Plants.** Four hours.

Three hours lecture and two hours laboratory per week.
Prerequisite: Advanced standing in botany.

Morphology of extant and fossil vascular plants.

G-411–**Plant Ecology.** Four hours.

Prerequisite: Advanced standing in botany.

Relationship of plants to their environment.

G-412–**Plant Physiology I.** Four hours.

Two theory and two laboratory periods per week.
Prerequisite: General botany (Botany 104 or its equivalent). General chemistry and organic chemistry recommended.

The basic physiological processes of green plants.

G-413—**Plant Physiology II.** Four hours.

Prerequisite: BIO G-412.

The basic physiological processes of green plants. Greenhouse laboratory work.

G-415—**Cellular Physiology II.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: BIO 314.

Advanced cellular physiology.

G-417—**Taxonomy of Higher Plants.** Four hours.

Prerequisites: BIO 101 and 103.
Two theory periods and two 2-hour laboratory periods per week.

The classification of seed plants.

G-418—**Field Zoology: Macroscopic Invertebrates.** Four hours.

One hour lecture and six hours laboratory per week.
Prerequisites: BIO 101; 102, and 103.

Collection, preservation, identification of local, macroscopic, marine, freshwater, and terrestrial invertebrates. Field work as needed.

G-419—**Field Zoology: Microscopic Invertebrates.** Four hours.

One hour lecture and six hours laboratory per week.
Prerequisite: BIO 101, 102, and 103.

Collection, preservation, identification of local, microscopic, marine, freshwater, and terrestrial invertebrates. Field work as needed.

G-421—**Embryology I.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.
Prerequisites: BIO 101, 102, 103, 301, and 302.

Embryology of vertebrates, emphasizing the frog. Maturation, fertilization, cleavage, origin and development of germ layers, histogenesis, and organogenesis.

G-422—**Embryology II.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.
Prerequisite: BIO G-421.

A continuation of BIO G-421 emphasizing the higher vertebrates.

G-423—**Plant Anatomy.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: BIO 104.

A study of the anatomy of vascular plants.

G-424—**Histology.** Four hours.

Three lecture periods and two hours laboratory per week.
Prerequisites: 24 hours of biology.

Microscopic anatomy of mammalian organ systems.

G-425—**Introductory Mycology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: Consent of instructor.

Taxonomy, physiology, and biochemistry of fungi.

G-427—**Biogeography.** Two hours.

Two lectures per week.

A descriptive and analytical study of the distribution of plants and animals.

G-430—**Mammalian Physiology I.** Four hours.

Three hours lecture and one two-hour laboratory period per week.
Prerequisites: BIO 101-103, BIO 228 or 301-302.

The major mammalian physiological systems, emphasizing their interrelationships and their regulation of the internal environment.

G-432—**Mammalian Physiology II.** Four hours.

Prerequisite: BIO G-430.

Continuation of BIO G-430.

G-433—**Medical Entomology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: BIO G-452.

Arthropod vectors and agents of disease.

G-435—**Mammalogy.** Four hours.

Two hours lecture and four hours laboratory and field work per week.
Prerequisite: BIO 301 or 302 recommended.

Morphology, taxonomy, life history, distribution, evolution, and adaptations of mammals.

G-437—**Ornithology.** Four hours.

Two hours lecture and four hours laboratory and field work per week.
Prerequisite: BIO 301 or 302 recommended.

Morphology, taxonomy, life history, distribution, evolution, and adaptations of birds.

G-438—**Botany I.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.
Prerequisites: BIO 101 and 104.

Anatomy, physiology, life cycles, and economic significance of the Thallophytes.

G-439—**Botany II.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.
Prerequisite: BIO G-438.

Anatomy, physiology, life cycles, and economic significance of the Bryophytes and Pteridophytes.

G-448—**Comparative Animal Physiology I.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: 16 hours of biology, 12 hours of chemistry.

A comparison of vertebrate physiological systems, emphasizing the influence of the environment.

G-449—**Comparative Animal Physiology II.** Four hours.

A continuation of BIO G-448.

G-450—**Principles of Nomenclature.** Two hours.

Prerequisite: Consent of instructor.

Discussions and problems in biological nomenclature.

G-452—**Entomology.** Four hours.

Prerequisites: BIO 101, 102, and 103.

Structural adaptations, classification, life histories and habits, and the economic importance of insects.

G-455—**Experimental Embryology.** Four hours.

Prerequisites: BIO 421 and 422.

Factors which activate or regulate developmental processes.

G-466—**Ichthyology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: BIO 101, 102, 103.

Collection, preservation, and identification of local species of fishes and fish-like vertebrates, with primary emphasis on fresh water forms. Field work when possible.

G-468—**Parasitology I.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: BIO 101 and 102.

Systematics, life histories, and host relationships of animal parasites, emphasizing those affecting man.

G-469—**Parasitology II.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: G-468 or consent of instructor.

A continuation of G-468.

G-479—**Introduction to Biological Oceanography.** Four hours.

Four hours per week.
Prerequisites: G-481 and G-482.

Oceanography, including ocean basin topography, distribution of bottom sediments, and physical and chemical characteristics of sea water.

G-480—**Aquatic and Marsh Plants.** Four hours.

Two hours lecture and four hours laboratory and field work per week.
Prerequisite: Advanced standing in biology or consent of instructor.

Collection, identification, and ecology of aquatic and marsh plants occurring in fresh and brackish water. Field and laboratory investigations of common local aquatic vegetation.

G-482—**Ecology II.** Four hours.

Two hours lecture and four hours laboratory or field work per week.
Prerequisite: BIO 481.

Ecological effects of temperatures, light, rainfall, and salinity. Relationship of respiration and osmoregulation to environmental factors. Population growth.

G-481—**Ecology I.** Four hours.

Two hours lecture and four hours laboratory or field work per week.
Prerequisites: 24 hours of biology including a course in botany.

Interrelations between organisms and their environment. Biogeochemical cycles and nutrient distribution. Limiting factors, productivity, and energy transfer in food chains. Ecological succession.

G-483—**Ecology III.** Four hours.

One hour lecture and a minimum of six hours laboratory per week.
Prerequisite: BIO 482.

Directed field and laboratory problems in beginning ecological research.

G-484—**Limnology.** Four hours.

Prerequisites: BIO 101, 102, 103; G-481 and G-482 strongly recommended.

The physical, chemical, and biological conditions in lakes, ponds, and streams.

G-485—**History of Biology.** Two hours.

Prerequisites: 36 quarter hours of biology.

Lectures and readings concerning the development and organization of biological sciences. The development of biological principles and theories will be emphasized. For seniors and graduate students only.

G-492—**Biological Problems I, II, III.** Two hours each.

Given only by special arrangement.

A course in special techniques, designed for majors with a need for certain basic biological techniques as tools for future research.

502—**Taxonomy of the Flowering Plants for High School Teachers.** Four hours.

Eight hours lecture-laboratory and/or field trips per week.

The taxonomy and ecology of flowering plants; especially designed for teachers of secondary biology.

507—**Advanced General Botany for High School Teachers.** Four hours.

Eight hours laboratory-discussion and/or field trips per week.

The general physiology and ecology of seed plants; especially designed for teachers of secondary biology.

511—**Vertebrate Biology for High School Teachers.** Four hours.

Eight hours lecture-laboratory and/or field work per week.

The biology of vertebrates, emphasizing techniques of collection and preservation of specimens; especially designed for teachers of secondary biology.

512—**Cytology I.** Four hours.

Four hours lecture per week.
Prerequisites: 12 hours of chemistry, 12 hours of physics, or permission of the instructor.

Cellular morphology, metabolism, growth, differentiation, and reproduction.

513—**Cytology II.** Four hours.

Four hours lecture per week.
Prerequisite: BIO 512.

A continuation of BIO 512.

515—**Biological Oceanography.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: BIO 482 or G-482.

The sea as a biological environment.

520—**Advanced Herpetology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: BIO 360 and permission of instructor. BIO 301, 302, recommended.

Systematics, natural history, and economic importance of reptiles and amphibians.

521—**Advanced Systematic Herpetology.** Four hours.

Prerequisite: Permission of instructor.

Problems in the systematics and distribution of reptiles and amphibians.

525—**Advanced Ichthyology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: BIO 466 or G-466 and permission of instructor. BIO 301, 302, recommended.

Systematics, natural history, and economic importance of fishes.

526—**Advanced Systematic Ichthyology.** Four hours.

Prerequisite: Permission of instructor.

Problems in the systematics and distribution of fishes.

527—**Speciation.** Two hours.

Prerequisite: BIO 401 or G-401.

Current concepts of phylogeny and the origin of the species.

530—**Helminthology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: BIO G-468 and G-469.

Systematics, morphology, and host-relationships of helminths.

532—**Parasite Physiology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: BIO G-414 and G-415.

Current concepts of the physiology of parasites.

550—**Advanced Taxonomy of Seed Plants.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 104 and 417.

Experimental approaches to problems in plant taxonomy. Laboratory devoted to classification of seed plants.

552—**Biology I. Analytical Methods in Biological Research.** Two hours.

Two hours laboratory and lecture work combined.
Prerequisites: Inorganic and organic chemistry, 36 quarter hours biological science. One year of physics also recommended.

Introduction to the use of analytical research instruments.

552—**Biology II. Analytical Methods in Biological Research.** Two hours.

A continuation of Biology I.

560—**Topics in Marine Biology.** Two hours.

Prerequisites: BIO 101, 102, 103; CHE 301, 302, 303.

Special topics in marine physiology and biochemistry.

563—**Fisheries Biology.** Four hours.

Two hours lecture and four hours laboratory or field work per week.
Prerequisite: BIO 466 or G-466. BIO 484 or G-484 highly recommended. Permission of instructor.

Ecology and conservation of fishes.

564—**Biological Photography.** Two hours.

One hour of lecture and two hours laboratory per week.

Techniques of biological photography.

567—**Marine Ecology.** Four hours.

Two hours lecture and four hours laboratory or field work per week.
Prerequisite: BIO 482 or G-482.

The physical and chemical nature of the marine environment and the ecology of marine organisms.

568—**Planktology.** Four hours.

Two hours lecture and four hours laboratory or field work per week.
Prerequisite: BIO 418 or G-418 or BIO 453 or G-453.

The morphological adaptations and life histories of plankton.

569—**Invertebrate Embryology.** Four hours.

Two hours lecture and four hours laboratory or field work per week.
Prerequisites: BIO 101, 102, 103.

The embryology of invertebrates, emphasizing that of marine animals.

582—**Physiology of Marine Animals.** Four hours.

The environmental physiology of marine animals.

584—**Seminar in Animal Behavior.** Two hours.

Special topics in ethology, in areas of individual interest.

586—**Seminar in Physiology.** Two hours.

Special topics in physiology in areas of individual interest.

592—**Special Problems in Biology I, II, III, IV.** Two hours each.

Prerequisite: A thorough background in biology.

Faculty-directed research in areas of individual interest.

596—**Biology Seminar I, II, III.** One hour each.

The presentation of current concepts in special areas of individual interest.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

601—**Research in Zoology.** Credits to be arranged for maximum of eight quarter hours.

791—**Research in Biology.** Credit to be arranged.

Prerequiste: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

COURSES TAUGHT AT THE GULF COAST RESEARCH LABORATORY IN OCEAN SPRINGS BY THE GULF COAST RESEARCH LABORATORY STAFF

G-429—Marine Botany. Six hours.

Prerequisites: General botany, plant taxonomy, and BIO 339.

A survey, based upon local examples, of the principal groups of marine algae, treating their structure, reproduction, distribution and general biology; including a survey of the common maritime flowering plants, their identification and ecology.

G-431—Marine Vertebrate Zoology. Nine hours.

Prerequisites: 12 hours in biology, including comparative anatomy.

A formal lecture and laboratory survey of all marine chordates, including the lower subphyla, the fishes, reptiles, mammals, and shore birds.

541—Marine Fisheries Biology. Six hours.

Prerequisites: 18 quarter hours of zoology and one year of college mathematics.

An introduction to the general principles of the subject including the simpler statistical procedures, collection of production statistics, and a general review of the world fisheries with special emphasis on the United States.

G-454—Marine Invertebrate Zoology. Nine hours.

A study of the structure, natural habitats, classification and economic importance of invertebrate species native to the waters of the Mississippi Sound and around the outlying islands.

565—Marine Microbiology. Four hours.

Twelve hours of lecture and laboratory per week.
Prerequisite: Graduate standing in microbiology, or in marine biology with adequate microbiological background.

Examination of microbial flora of representative environments. Taxonomy, physiology, economic significance, and effect upon biologic communities.

566—Marine Phycology. Credits (maximum six hours) and schedules by arrangement.

Prerequisites: Graduate standing, consent of instructor, and some familiarity with the fundamentals of both plant physiology and phycology (culture and taxonomy).

Areas of concentration according to seasonal activities and needs or interest of the student.

DEPARTMENT OF CHEMISTRY (CHE – 320)

John H. Bedenbaugh, Chairman

A. Bedenbaugh C. Brent B. Campbell Hampton J. Howell
Pinson Toom van Aller Wertz H. P. Williams

MASTER'S DEGREE PROGRAMS

The Department of Chemistry participates in programs leading to the Master of Arts and the Master of Science degrees. For all master's degrees a minimum of forty-six (46) graduate hours is required.

The Department has the same requirements for the Master of Arts and Master of Science degrees, so the title of the degree is optional with the student. These degrees require proficiency in a language, a minor of sixteen (16) hours, and major courses selected by the student in consultation with the department chairman or the major professor. The Department will require a qualifying examination to be taken during the first week upon entering Graduate School. The results of this examination will be used to determine any deficiencies, which will be required to be removed. The student will also be required to attend seminars each quarter of residence. The language requirement will, in most cases, be German. An acceptable problem in research must be completed and terminated by a thesis and an oral examination defending the thesis.

DOCTOR OF PHILOSOPHY PROGRAM

The Department of Chemistry feels that the degree of Doctor of Philosophy is not to be conferred because of the successful completion of a pre-determined number of credit hours but only in recognition of excellence in research and scholastic attainment. However the University requires a minimum of 118 hours beyond the bachelor's or seventy-two (72) beyond the master's degree.

The departmental requirements for the Doctor of Philosophy degree are those stated under the general requirements in this **Bulletin** plus the following:

1. The Department of Chemistry is offering majors in the fields of analytical, biochemistry, inorganic, organic, and physical chemistry.

2. A student, with faculty consent, may choose to bypass the master's degree as he proceeds toward the doctoral degree.

3. The course work required will be determined by the student and the graduate committee. The choice of the field of study shall rest with the student as shall the choice of the major professor after consultation of the student with each member of the graduate faculty.

4. One year of residence time will be allowed for the time spent in obtaining the master's degree if it is transferred from another school. Residence time

is based on full-time study as determined by the Department. Only under exceptional circumstances will a student be permitted to do any of the last two years of residence at another location. The dissertation shall be presented to the major professor for correction and criticism before the end of the quarter preceding the quarter of graduation. After approval by the major professor the candidate will circulate copies of the dissertation to his doctoral committee for correction and criticism. After the committee's approval the oral examination will be scheduled by the chairman of the doctoral committee consistent with University policy.

COURSE DESCRIPTIONS (CHE – 320)

G-401, G-402, G-403–**Physical Chemistry.** Four hours each.

Three lecture periods and one 3-hour laboratory period per week.
Prerequisites: CHE 303, Integral Calculus, and 1 year of physics.

A mathematical treatment of the laws governing chemical and physical changes. Topics treated are chemical thermodynamics, kinetics, surface and interface phenomena, nuclear chemistry, quantum chemistry, and spectroscopy. Emphasis is placed on problem solving in each of these areas.

G-405–**Instrumental Analysis.** Five hours.

Four theory and three laboratory hours per week.
Prerequisites: CHE 303 and 305.

A course in the theory and use of analytical techniques such as colorimetry, polarimetry, ultraviolet, visible and infrared spectrophotometry, gas chromatography, mass spectroscopy, nuclear magnetic resonance spectroscopy, etc.

G-406–**Qualitative Organic Analysis.** Five hours.

Two hours lecture and eight hours laboratory per week.
Prerequisite: CHE 303.

The systematic identification of pure organic chemicals and the analysis of mixtures, with considerable emphasis on chromatographic separation techniques and spectroscopic methods of analysis.

G-425–**Introduction to Biochemistry.** Five hours.

Three hours lectures and four hours laboratory per week.
Prerequisite: CHE 303.

Subjects discussed include proteins, enzymes, nucleic acids, biological oxidations and photosynthesis.

G-426—**Intermediary Metabolism.** Five hours.

Three hours lecture and four hours laboratory per week.
Prerequisite: G-425.

This course is designed to acquaint the student with the major metabolic cycles and pathways. Energy considerations and the interrelation of these pathways are included.

G-427—**Metabolic Control.** Five hours.

Three hours lecture and four hours laboratory per week.
Prerequisite: G-426.

The many systems of metabolic control are discussed. The role of hormones, vitamins and nucleic acids in control mechanisms are included along with a discussion of the circulatory system and the chemical basis of antibody diversity.

G-461—**Applications of Nuclear Techniques.** Four hours.

Three hours lecture and one 3-hour laboratory per week.
Prerequisite: Permission of the instructor.

Nuclear techniques applied to the solution of biological, chemical, environmental, geological, physical, health, and medical problems. Training consists of radioisotope handling, radiation detection, radiation shielding, nuclear design problems, tracer techniques, and radiological health monitoring. Numerous radiation sources are used and studied.

521—**Advanced Analytical Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 405 or permission of instructor.

This course consists of sampling techniques, equilibria and activity, chemical and physical separations, and chemical methods of analysis.

522—**Advanced Analytical Instrumentation.** Four hours.

Three hours lecture and two hours laboratory per week.
Prerequisite: CHE 521 or permission of instructor.

Theory and use of the following spectroscopy techniques are presented: Ultraviolet, visible, IR, NMR, x-ray, ESR, emission, atomic absorption and mass spectroscopy. Also included are polarography, coulometry, potential step electrolysis and electrode end point detection.

525—**General Biochemistry I.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 303

An intensive study of modern biochemistry. Topics covered include the biochemistry of carbohydrates, lipids, proteins, nucleic acids, porphyrins and chlorophyll.

526—**General Biochemistry II.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 525

An introduction to the major metabolic pathways and cycles including metabolism of carbohydrates, lipids, amino acids, purines and pyrimidines, with emphasis on the interrelationships of these pathways.

527—**General Biochemistry III.** Four hours.

Three hours lecture and three hours laboratory per week.
Prerequisite: CHE 526

The genetic aspects of metabolism and protein synthesis are discussed. Also included is a discussion of specialized tissue, body fluids, vitamins and hormones and their role in metabolic control.

531—**Theoretical Concepts in Inorganic Chemistry.** Four hours.

Four hours lecture per week.

The course will consist of various approaches to chemical bonding and structure.

532—**Inorganic Reactions and Mechanism.** Four hours.

Four hours lecture per week.

A systematic study of various classes of inorganic reactions.

533—**Physical Inorganic Chemistry.** Four hours.

Four hours lecture per week.

A study of acid-base concepts, solvation, thermodynamics, electrochemistry, etc.

535—**Inorganic Preparations.** Two or four hours.

One hour lecture and six or twelve hours laboratory per week.
Prerequisite: Permission of instructor.

Preparation and identification of various types of inorganic compounds.

541—**Advanced Organic Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: Successful completion of Organic Qualifying Examination or in special instances, permission of instructor.

A study of the structure of organic compounds and the relation to chemical bonding, stereochemistry, resonance concepts, and in general, the effects of structure on reactivity.

542—**Advanced Organic Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 541, or in special instances permission of the instructor.

A study designed to classify organic reaction mechanisms with respect to basic mechanisms with individual reactions selected to elucidate their scope. A comprehensive study of NMR, mass spectrometry, ultraviolet and infrared spectroscopy as related to their use in structure determinations.

543—**Advanced Organic Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 542.

A continuation of the study designed to classify organic reaction mechanisms. Much emphasis is placed on the student's ability to plan successful synthetic routes and the mechanisms involved in such transformation. Course designed to strengthen those principles established in CHE 541 and 542.

545—**Organic Preparations.** Two or four hours.

One hour lecture and six or twelve hours laboratory per week.
Prerequisite: Permission of instructor.

A course designed to familiarize the student with specialized synthetic techniques in organic chemistry not encountered at the undergraduate level and to acquaint him with large scale preparations and the equipment involved.

561, 562, 563—**Advanced Physical Chemistry.** Four hours each.

Four hours lecture per week.

A course designed to give the student a working knowledge of physical chemistry and its applications. Topics discussed are: statistical mechanics and classical thermodynamics; kinetics and absolute rate theory; group theory and symmetry applied to spectroscopy problems; potential functions; quantum mechanics and spectroscopy; introductory nuclear chemistry.

594—**Seminar.** One hour each quarter.

One hour per week.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

Prerequisite: Consultation with and permission of major professor.

621—**Spectroscopy.** Four hours.

Four hours lecture.

Prerequisite: Permission of instructor.

A detailed study of spectroscopic theory and techniques.

631—Structure and Bonding. Four hours.

Four hours lecture per week.
Prerequisite: CHE 533 or permission of instructor.

This course consists of a detailed approach of chemical bonding via semi-quantum mechanical treatments such as M.O , L.C.A.O., hybrid orbitals, etc.

632—Coordination Chemistry. Four hours.

Four hours lecture per week.
Prerequisite: CHE 533 or permission of instructor.

A study of molecular orbital and ligand field treatments of various complexes. Emphasis on electronic and vibronic transitions.

635—Element of Diffraction. Four hours.

Three hours lecture and three hours laboratory per week.

This course will consist of a treatment of scattering by x-rays, by neutrons, and by fast electrons from solids, liquids, and gases. Emphasis will be placed upon the current literature as well as classical techniques and analyses.

641—Physical Organic Chemistry. Four hours.

Four hours lecture per week.
Prerequisite: CHE 543.

Selected topics including application of quantum mechanics to organic chemistry, use of kinetic and product studies to determine mechanisms, and use of cryoscopy, isotopes, etc., in the elucidation of structure and mechanism in organic chemistry.

642—Mechanisms of Organic Reactions. Four hours.

Four hours lecture per week.
Prerequisite: CHE 543.

Principles and applications of organic chemistry relative to structure of molecules and the mechanism of organic reactions. Much emphasis is placed on newer developments as reported in the chemical literature. Stereochemistry, kinetics, and thermodynamics are topics of special interest.

645—Polymer Chemistry I. Four hours.

Four hours lecture per week.
Prerequisite: CHE 543 and permission of instructor.

A study of selected polymer systems, polymerization mechanisms, structure-property relationships and methods of evaluation.

646–**Polymer Chemistry II.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 645.

A study of selected polymer systems, polymerization mechanisms, structure-property relationships and methods of evaluation.

651–**Enzymes.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 427 or CHE 527

Mechanisms of enzymatic action, enzyme kinetics, regulation of enzyme action and synthesis of enzymes.

652–**Physical Biochemistry.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 427 or CHE 527

Application of physical-chemical methods to the study of biological macromolecules.

662–**Statistical Thermodynamics.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 563 or permission of instructor.

This course consists of statistical mechanical theory and techniques applied to the calculation and examination of thermodynamic properties. Topics encompassed are: classical mechanics, quantum mechanics, systems of independent particles, chemical equilibrium; distribution laws, partition functions, and thermodynamic functions for atomic and diatomic molecules; nuclear spin states and isotope effects; classical statistics and the kinetic theory of gases; polyatomic molecules, blackbody radiation, real gases, lattice vibrations; distribution functions and theory of dense fluids; solutions of electrolytes and the Debye-Huckel theory.

665–**Structural Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 563.

This course will consist of a theoretical treatment of structural determinations and will encompass the following: symmetry, wave mechanics, rotation, nuclear magnetic resonance, molecular vibrations, anisotropic polarization, crystal structure analysis, electron diffraction.

690–**Chemical Literature.** Four hours.

Four hours lecture per week.
Prerequisite: Permission of the instructor.

In this course, the student learns in detail how to search the literature for information related to his research. The major part of the course is concerned with information retrieval methods but discussions of general library procedures are included.

731—**Organometallic Compounds.** Four hours.

Four hours lecture per week.
Prerequisites: CHE 553 and CHE 543 or permission of instructor.

The chemistry of compounds containing carbon-metal and carbon-metalloid bonds. The preparation, structure, physical properties and chemical reactions of organometallic derivatives will be stressed along with topics of current interest in the chemical literature.

732—**Nuclear Chemistry.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: Permission of instructor.

This course consists of a study of the interactions of radiation with matter, the nature of radioactivity, radioactive decay, radiation detection, nuclear reactions, nuclear models, tracers in chemical applications, nuclear spectroscopy, nuclear processes as chemical probes, and safety in handling radioactive materials. The laboratory is devoted to radiation detection using gieger, proportional, scintillation, surface barrier, and multichannel analyzer techniques and chemical problems utilizing these detection devices. A laboratory project involving the use of radioactive tracers in chemical synthesis is required.

734—**Radiation Chemistry.** Four hours.

Four hours lecture per week.
Prerequisites: CHE 563 and permission of the instructor.

A study of the interaction of radiation with matter. Radiation sources, radiation dosimetry, ions and excited molecules, ion-molecule reactions, free radicals, radiation-induced polymerization, radiation interactions in gaseous, liquid, and solid systems, and the application of radiation to chemical processing.

741—**Stereochemistry of Organic Compounds.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 543.

Basic concepts followed by a number of specialized topics including configurational correlations, conformation and reactivity, the stereochemistry of ring systems, stereochemical aspects of trivalent carbon, and optical rotatory dispersion.

743—**A Survey of Heterocyclic Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 543.

Nomenclature, synthesis, and reactions of the more common heterocylic systems are presented with the purpose of teaching fundamental facts that can be applied to the study of more complex heterocyclic systems.

744—**Organophosphorus Compounds.** Four hours.

Four hours lecture per week.
Prerequisite: CHE 543.

A study of compounds containing carbon-phosphorus bonds. The preparation, structure, physical properties, mechanism of chemical reactions and synthetic applications will be covered. Topics of current interest will be stressed.

745—**Biosynthetic Pathways.** Four hours.

Prerequisite: Permission of instructor.
Four hours lecture per week.

A course designed to acquaint the student with metabolic pathways in detail. Subjects discussed are biosynthesis of terpenes, sterols and steroid hormones.

761—**Quantum Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: Permission of instructor.

This course consists of quantum mechanical theory applied to the solution of chemical problems. The following topics are discussed: origins of quantum theory, modern wave mechanics, operators, kinetics of radiative processes, angular momentum, systems with spherically symmetrical potentials, many-electron atoms, matrix theory, methods of approximating solutions to the Schroedinger wave equation, electron spin and Pauli principle, atomic structure, group theory, molecular structure, Hartree-Fock self-consistant-field method, electronic structure of polyatomic molecules, and Pi-electron systems.

762—**Chemical Kinetics.** Four hours.

Four hours lecture per week.
Prerequisite: Permission of instructor.

A study of the experimental techniques of measuring chemical reaction rates and the mathematical treatment of rate data. Topics include reaction order; molecularity; modern rate theories; ionic, free radical and complex reaction mechanisms; homogeneous, heterogeneous and enzyme catalysis; and the study of very fast reactions.

763—**Electrochemistry.** Four hours.

Four hours lecture per week.
Prerequisite: Permission of instructor.

The theory of thermodynamics of electrochemistry, theoretical derivations of electrochemical techniques and applications thereof will be presented.

764—**Colloid Chemistry.** Four hours.

Four hours lecture per week.
Prerequisite: Permission of instructor.

Study of the methods of preparation, properties and potential applications of two phase systems in which the dispersed phase is not dispersed to the extent of making a true solution, but is finely dispersed so that it presents such a large area of contact that surface area forces a stable equilibrium between the two phases.

791—**Research in Chemistry.** Credit arranged.

Prerequisite: Approval of the major professor.

794—**Seminar.** One hour each quarter.

One hour per week.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF COMPUTER SCIENCE AND STATISTICS (CSS – 330)

Danny R. Carter, Acting Chairman

Burge Nagurney Nissan Phillippi

The Department of Computer Science and Statistics participates in the program leading to a minor in statistics at the master's level. For a minor, the student must take sixteen (16) graduate hours which should be selected from the following courses:

CSS G-415—**Methods of Mathematical Statistics I.** Four hours.

CSS G-416—**Methods of Mathematical Statistics II.** Four hours.

CSS G-425—**Experimental Design.** Four hours.

CSS G-427—**Sampling Methods.** Four hours.

CSS 535—**Probability Theory.** Four hours.

CSS 536—**Statistical Inference.** Four hours.

CSS 537—**Least Squares Techniques.** Four hours.

Students may take the following courses in the Department of Psychology and apply them to a minor in statistics.

PSY 562—Research Methods: Descriptive Statistical Methods. Four hours.

PSY 563—Research Methods: Significance Tests and Experimental Designs. Four hours.

PSY 701—Factor Analysis. Four hours.

Doctoral candidates may take twelve (12) hours in either statistics or computer science in lieu of a second language. Specific courses will be determined by this Department and by the student's graduate committee.

COURSE DESCRIPTIONS (CSS – 330)

G-403—Introduction to Analog Computers. Four hours.

Prerequisite: MAT 378.

Design and testing of basic analog circuits.

G-404—Advanced Analog and Hybrid Systems. Four hours.

Prerequisite: CSS G-403.

Use of the analog computer to solve engineering problems.

G-412—Educational Statistics. Four hours.

Prerequisite: Permission of instructor.

Elementary probability, conditional probability, Binomial experiments, curve fitting, least squares techniques, correlation and regression models.

G-415—Methods of Mathematical Statistics I. Four hours.

Prerequisite: MAT 276 or permission of instructor.

Continuous and discrete distributions, moments of distributions, point and interval estimation, hypothesis testing, power of tests, analysis of variance (one-way classification, orthogonal contrasts), two-way classification analysis of variance, fixed, random and mixed methods.

G-416—Methods of Mathematical Statistics II. Four hours.

Prerequisite: CSS G-415.

Orthogonal polynomial contrasts, multi-way classification, simple linear regression, multiple linear regression, polynomial regression, Designs (simple randomized blocks, nested factorials), intra-class correlation, quality control.

G-425—Experimental Design. Four hours.

Prerequisite: CSS G-416.

Factorials, randomized blocks, Latin Squares and split-plot, fractional factorials and confounding, response surface models.

G-427—**Sampling Methods.** Four hours.

Prerequisite: CSS G-416.

The planning, execution and evaluation of sample surveys. Simple random sampling, stratified random sampling, cluster sampling.

G-474—**Boolean Algebra and Switching Circuits.** Four hours.

Prerequisite: Permission of instructor.

Symbolic logic and Boolean algebra for descriptions and analysis of switching circuits, basic sequential circuits, digital systems design principles.

535—**Probability Theory.** Four hours.

Prerequisite: MAT 379.

Basic concepts in probability, properties of continuous and discrete distribution, characteristic functions, laws of convergence, transformations.

536—**Statistical Inference.** Four hours.

Prerequisite: CSS 535.

Properties of estimators, Bernoulli and Poisson processes, Cramer-Rao lower bound, power of tests.

537—**Least Squares Techniques.** Four hours.

Prerequisite: CSS 536.

Regression Analysis, Doolittle method, curvilinear regression, experimental design models.

DEPARTMENT OF GEOLOGY (GLY – 340)

Richard L. Bowen, Chairman

B. W. Brown Goossens Hoskin Paulson

The Department of Geology participates in programs leading to the Master of Arts, Master of Science, and the Master of Education degrees in geology. For all master's degrees, a minimum of forty-six (46) graduate hours is required, twenty-four (24) of which must be in courses numbered above 500. For the Master of Arts or the Master of Science, the student must complete an original research program and submit a thesis acceptable to the Department; a thesis committee which supervises these activities is established when the student is formally admitted to degree candidacy. In addition to the general University requirements, the student must take an evaluation examination. This examination must be taken before the student can be formally admitted to degree candidacy; it is desirable to schedule it, upon consultation with the department chairman, before initial enrollment in graduate study, but in no case

may it be delayed later than the time of completion of twelve (12) hours of graduate study. The score on the advanced subject (in the area of science) on the Graduate Record Examinations must be submitted prior to enrollment; no student will be admitted to candidacy for the master's degree in geology who has a score of less than 900 on the combined total of aptitude and advanced sections of the Graduate Record Examinations.

Students following programs leading to the Master of Arts or the Master of Science degree in geology will be required to take a summer field course if they did not have such a course as undergraduates (this stipulation may be waived, upon application, on account of sex or physical disability). All graduate students in geology are required to attend seminars during each quarter of residence.

For the Master of Arts and the Master of Science degrees the student must take a minor of sixteen (16) hours in a field approved by the Department; for the Master of Arts degree, he must also demonstrate a reading knowledge of a language pertinent to the subject of his thesis.

For the Master of Education the student electing earth science as a subject-matter area must take a minimum of twenty-four (24) hours of graduate geology courses (up to eight hours of graduate courses in allied fields, such as geography or physics, may be substituted, if, in the opinion of the student's advisory committee, the courses fall in the category of "earth science").

The Department has a cooperative arrangement with the Gulf Coast Research Laboratory at Ocean Springs, Mississippi. Certain courses in marine geological studies may be taken at the Laboratory; these are generally taught in the summer.

COURSE DESCRIPTIONS (GLY – 340)

G-401—**Principles of Stratigraphy.** Four hours.

Four hours lecture; week-end field trip.
Prerequisites: GLY 260, 302, 330.

G-420—**Sedimentology.** Four hours.

Two lectures and four hours laboratory per week.
Prerequisite: Permission of instructor.

Study of sedimentary materials, their formation, transportation, deposition, and lithification; field trips.

G-422—**Petroleum Geology.** Four hours.

Two lectures and four hours laboratory per week.
Prerequisite: Permission of instructor.

The origin, occurrence, migration, and accumulation of oil and gas.

G-430—**Elements of Geochemistry.** Four hours.

Three lectures and one laboratory per week.
Prerequisites: Consent of instructor, CHE 103 or equivalent, GLY 101.

Geochemical cycles of the atmosphere, hydrosphere and lithosphere. Concentration controls. Geochemical effects in earth history. Techniques of geochemical exploration.

G-431—**Elements of Geophysics.** Four hours.

Three lectures and one laboratory per week.
Prerequisites: Consent of instructor, MAT 103, PHY 103 (or 203), GLY 101.

Terrestrial magnetism and electricity. Gravitational field variations and measurements. Seismic reflection and refraction. Nuclear geology. Surface and subsurface measurements. Concepts and significance of geophysical variations.

G-445—**Economic Geology.** Four hours.

Two lectures and four hours laboratory per week.
Prerequisites: GLY 310, 314, and 330.

Principles of ore deposits; introduction to fuels and non-metallic mineral deposits.

G-452—**Physical Marine Geology.** Up to 9 quarter hours. Gulf Coast Research Laboratory.
Prerequisites: GLY 103, 310, and 420.

A general introduction to the physical processes at work on the shores of Mississippi Sound with emphasis on the erosional and depositional effects of waves and currents at different stages of tide.

G-453—**Chemical Marine Geology.** Up to 9 quarter hours. Gulf Coast Research Laboratory.

Prerequisites: GLY 103, 310, 420, and CHE 203.

Supervised research in the chemistry of the waters and sediments of Mississippi Sound.

G-454—**Problems in Marine Sedimentation.** Up to 9 quarter hours. Gulf Coast Research Laboratory

Prerequisite: Permission of instructor.

Supervised study of selected aspects of marine sedimentation along the Gulf Coast.

G-461—**Petrography.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisites: GLY 311 and 314.

Systematic study of rocks by means of the polarizing microscope.

G-468–**Micropaleontology I.** Four hours.

One hour lecture and six hours laboratory per week.
Prerequsites: GLY 302 and 303.

Taxonomy, morphology, and stratigraphic use of Foraminifera.

G-469–**Micropaleontology II.** Four hours.

Prerequisites: GLY 302 and 303.

Taxonomy, morphology, and stratigraphic use of Ostracoda.

G-479–**Introductory Oceanography.** Four hours.

Prerequisites: GLY 103, PHY 103, CHE 103 or equivalents, and permission of instructor.

Techniques and results of study of the oceanic hydrosphere and its interfacial relationships with the lithosphere and atmosphere. Interdisciplinary approaches especially suitable for training in science education programs are emphasized.

G-482–**Geological Excursion.** Two hours (May be repeated, in a different region, for four hours credit.)

Field studies of geological phenomena in areas remote from the campus, by means of 8-10 day field trips, between quarters. Must be registered for at registration time of quarter preceding the trip; credit granted during the quarter following the trip, after completion of field report. Transportation fee will be assessed, dependent on length of trip.

505–**Paleoclimatology.** Four hours.

Prerequisite: Permission of instructor.

Methods of investigation of and evidence regarding the determination of climatic conditions of the past as based on the rock, mineral, and biologic record.

511–**Pleistocene Geology.** Four hours.

Lectures and discussions.
Prerequisites: GLY 101 and permission of instructor.

Geologic history of the earth since the beginning of the Pleistocene Epoch with emphasis on glacial phenomena.

514–**Geology of Groundwater.** Four hours.

Lectures and discussions; field trips.
Prerequisite: Permission of instructor.

Occurrence and production of groundwater.

515–**Principles of Geology for High School Science Teachers.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: Bachelor's degree in science or its equivalent.

Principles of physical and historical geology for teachers in the NSF Summer Institute. The course can not be applied toward a major or minor in geology.

516—**Survey of the Lithosphere I.** Four hours.

Three lecture and two laboratory hours per week. Field trips.
Prerequisite: Permission of instructor.

Review of observations regarding and methods of analysis of the crust of the earth. This course cannot be applied toward a major in geology; it is especially designed for participants in science education programs, but it is also open to others.

517—**Survey of the Lithosphere II.** Four hours.

Three lecture and two laboratory hours per week.
Prerequisite: Permission of instructor.

Methods of study of the earth's interior (mantle and core), procedures of investigation, concepts and theoretical foundations; hypotheses of cosmology.

530—**Advanced Structural Geology.** Four hours.

Lectures and discussions; field trips.
Prerequisite: GLY 330.

Theoretical analysis of rock deformation on a regional scale.

531—**Tectonics.** Four hours.

Prerequisite: Permission of instructor.

Examination of large-scale disturbances of the earth, stresses and strains involved, and methods of response.

532—**Structural Petrology.** Four hours.

Prerequisite: Permission of instructor.

Macroscopic and microscopic techniques of analysis of rock and mineral deformation; geological significance of such deformation.

533—**Hypotheses of Continental Drift.** Four hours.

Prerequisite: Permission of instructor.

Examination of the evidence regarding and concepts advanced with respect to large-scale crustal dislocations, with emphasis on the hypothetical former contiguity of South America and Africa.

540—**Sedimentary Environments.** Four hours.

Comparison between modern studies of environments of sedimentation and the sedimentary record of paleoenvironments.

569—**Gulf Coast Stratigraphy.** Four hours.

Lectures, discussions, and field trips.

Sediments and stratigraphic problems of the Gulf Coastal Region.

580—**Field Methods in Earth Science.** Nine hours.

Field studies in geology. Minimum of eight hours daily, five days/week, for five weeks.

Supervised instruction in methods of geological field studies in varied field areas followed by individual geological studies and the preparation of reports. Not available to those who have previously taken GLY 480.

591—**Seminar.** Two hours.

Only two hours allowed toward the master's program; varied topics.

592—**Special Problems in Geology I, II, III.** One to four hours each, by arrangement.

Open to graduate students only, who will be assigned a specific problem for investigation. Credit will be determined by the quality and quantity of accomplishment.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

DEPARTMENT OF MATHEMATICS (MAT – 350)

Porter G. Webster, Acting Chairman

Dunigan Felder Holmes King Morrell C. Ratcliff R. Ratcliff Thrash

The Department of Mathematics offers programs leading to the Master of Arts, Master of Science, and Master of Philosophy degrees with a major in mathematics. In cooperation with the College of Education and Psychology, the Master of Education and the Doctor of Education degrees are offered.

For all master's degrees, a minimum of forty-six (46) quarter hours of graduate work is required, twenty-four (24) quarter hours of which must be in courses numbered above 500. Up to sixteen (16) quarter hours may be taken in other fields. At least sixteen (16) hours of the courses numbered above 500 must be in mathematics.

For the Master of Science degree, proficiency in a foreign language is not required. The writing of a thesis is optional with the student's advisory committee.

Before completing twelve (12) hours of graduate work the student, with the help of his adviser, should outline his tentative graduate program.

A mathematics seminar is conducted each quarter for graduate students in mathematics. Its purpose is to contribute to the student's mathematical development. Each graduate student in residence is required to attend the mathematics seminar each quarter. A maximum of six (6) quarter hours credit may be earned for participation in the seminar.

The three-quarter sequence in advanced calculus should be completed before beginning the programs leading to the Master of Arts or the Master of Science degree. If not, then it must be included as a part of the program approved by the student's adviser.

A student must satisfy the present undergraduate requirements for a major in mathematics at the University of Southern Mississippi before beginning a program leading to a master's degree in mathematics. If a student cannot meet these requirements, he may be admitted to the Graduate School as a conditional graduate student and allowed to take work to fulfill these requirements. The hours required for a graduate degree will be in addition to this prerequisite. It should be emphasized that admission to the Graduate School does not imply acceptance of the student as a candidate for a graduate degree.

Graduate students in mathematics are required to pass an oral preliminary examination before being admitted to candidacy for a master's degree. The preliminary examination will cover fundamentals and will serve to identify the student's level of mathematical maturity. No student will be granted more than three attempts to pass the preliminary examination with at least a three-month interval between attempts. This examination will be administered not later than the fourth week of any quarter on a date arranged by the student with the student's adviser and the chairman of the Mathematics Department. A minimum of twenty (20) quarter hours of graduate courses must be registered for and completed after the examination is passed.

Candidates for either the Master of Arts or the Master of Science degree will take an oral comprehensive examination not later than the sixth week of the last quarter of residence on a date arranged by the student with the student's adviser and the chairman of the Mathematics Department.

No student will be permitted to select a thesis topic until he has been admitted to candidacy for a master's degree. The thesis in mathematics must conform to University regulations. Four copies of the candidate's thesis are required to be distributed as follows: two copies to the Dean of the Graduate

School, one copy to the chairman of the Mathematics Department, and one copy to the student's major professor.

COURSE DESCRIPTIONS (MAT – 350)

G-318–**Basic Concepts of Mathematics for Elementary School Teachers.** Four hours.

Prerequisite: MAT 100 or its equivalent.

Graduate credit is applicable only towards a master's degree in education earned in an in-service course.

G-401–**Geometry.** Four hours.

Prerequisites: MAT 341 and MAT 409 or secondary school geometry.

G-406–**Numerical Analysis I.** Four hours.

Prerequisites: MAT 326, MAT 405, CSS 210.

G-407–**Number Theory.** Four hours.

Prerequisite: MAT 341.

G-409–**Mathematics for Teachers of Junior High School Mathematics.** Four hours.

Prerequisites: MAT 100 and MAT 318.

Open only to elementary education majors or may be used as an elective for mathematics majors.

G-411–**Vector Analysis.** Four hours.

Prerequisite: MAT 379.

G-415–**Introduction to Differential Equations II.** Four hours.

Prerequisites: MAT 326, MAT 405

G-416–**Numerical Analysis II.** Four hours.

Prerequisites: MAT 405 and 406.

G-417–**Partial Differential Equations.** Four hours.

Prerequisites: MAT 405, MAT 411.

G-418–**Linear Programming.** Four hours.

Prerequisite: MAT 326.

G-420–**Statistics and Probability.** Four hours.

Prerequisites: MAT 341.

G-423—**Modern Algebra I.** Four hours.
Prerequisite: MAT 341.

G-424—**Modern Algebra II.** Four hours.
Prerequisite: MAT 423.

G-425—**Fourier Series.** Four hours.
Prerequisites: MAT 326 and MAT 405.

G-426—**Linear Algebra II.** Four hours.
Prerequisite: MAT 326.

G-431—**Functions of a Complex Variable I.** Four hours.
Prerequisite: MAT 379.

G-435—**Laplace Transform.** Four hours.
Prerequisite: MAT 405.

G-441—**Advanced Calculus I.** Four hours.

G-442—**Advanced Calculus II.** Four hours.
Prerequisite: MAT 441.

G-443—**Advanced Calculus III.** Four hours.
Prerequisite: MAT 442.

G-471—**General Topology.** Four hours.

G-472—**Algebraic Topology.** Four hours.
Prerequisites: MAT 424 and 471.

G-473—**Metric Spaces.** Four hours.

501—**Differential Geometry I.** Four hours.
Prerequisite: MAT 411.

503—**Modern Algebra.** Four hours.
Prerequisite: MAT 424.

505—**Differential Equations I.** Four hours.
Prerequisite: MAT 415.

506—**Differential Equations II.** Four hours.
Prerequisite: MAT 417.

507—**Differential Equations III.** Four hours.
Prerequisite: MAT 506.

531—**Functions of a Complex Variable II.** Four hours.
Prerequisite: MAT 431.

532—**Functions of a Real Variable I.** Four hours.
Prerequisite: MAT 443.

533—**Functions of a Real Variable II.** Four hours.
Prerequisite: MAT 532.

534—**Functions of a Real Variable III.** Four hours.
Prerequisite: MAT 533.

551—**Applied Mathematics I.** Four hours.

552—**Applied Mathematics II.** Four hours.
Prerequisites: MAT 441, MAT 551, corequisite MAT 442.

553—**Applied Mathematics III.** Four hours.
Prerequisites: MAT 552, corequisite MAT 443.

571—**General Topology II.** Four hours.
Prerequisite: MAT 471.

581—**Topics in Algebra.** Four hours.
Prerequisites: MAT 424 and permission of the instructor.

582—**Topics in Analysis.** Four hours.
Prerequisite: Permission of instructor.

583—**Topics in Topology and Geometry.** Four hours.
Prerequisite: Permission of the instructor.

591—**Research in Mathematics.** One to twelve hours.

594—**Mathematics Seminar I, II, III.** One hour each.
Prerequisite: Permission of instructor.

597—**Independent Study and Research.** Hour arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other

University facilities must enroll in this course.

598—**Thesis.** Six hours.

631—**Functions of a Complex Variable III.** Four hours.
Prerequisite: MAT 531.

694—**Mathematics Seminar I, II, III.** One hour each.
Prerequiste: Permission of instructor.

DEPARTMENT OF MICROBIOLOGY (MIC – 310)

Peter K. Stocks, Chairman

Barrett Brundage Roush Yarbrough

Any student having successfully completed a Bachelor of Science or Bachelor of Arts degree in any of the biological or physical sciences, who demonstrates a minimum score of 900 on the aptitude section of the Graduate Record Examinations, who has a grade point average of at least 3.0 in the physical or biological sciences, and who meets the requirements set forth by the Graduate School of the University of Southern Mississippi is eligible to pursue a program leading toward the Master of Science or Doctor of Philosophy degree in the Department of Microbiology. The Department of Microbiology endeavors to prepare students for teaching and/or research positions in industrial and medical microbiology and in genetics.

MASTER'S DEGREE PROGRAM

The Department of Microbiology will require a qualifying examination to be taken during the first week upon entering Graduate School. The results of this examination will be used to determine any deficiencies the student may possess which will be required to be removed. A minimum of forty-six (46) graduate hours is required, sixteen (16) of which must be in an approved minor area of science. An acceptable problem in research must be completed and terminated by a written and/or oral comprehensive examination.

DOCTOR OF PHILOSOPHY PROGRAM

The Doctor of Philosophy degree in the Department of Microbiology is considered foremost to be a research degree; however, a student must demonstrate excellence in scholastic attainments as well as research capabilities. The University requires a minimum of one hundred and eighteen (118) hours beyond the bachelor's or seventy-two (72) hours beyond the master's degree. The Department of Microbiology requires one foreign language and proficiency in statistics as set forth by the Graduate Council.

During a student's first or second quarter of enrollment, the Department will require a written and/or oral qualifying examination. A written and/or oral comprehensive examination must be taken at or near completion of the candidate's course work. Upon acceptance of the dissertation by the candidate's committee and at least four weeks prior to graduation, a final oral examination in defense of the candidate's dissertation will be administered by the Department of Microbiology. The Department furthermore requires that the candidate's research results be of a quality to be accepted for publication by a scholarly scientific journal.

COURSE DESCRIPTIONS (MIC – 310)

G-405–**Pathogenic Microbiology.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: MIC 339 and 340 and consent of instructor.

Schemes for isolation and indentification of major groups of disease producing organisms.

G-420–**Soil Microbiology.** Four hours.

Two hours lecture and two 2-hour laboratory periods per week.
Prerequisites: MIC 339, 340, and organic chemistry, or consent of instructor.

Study of soil microflora, emphasis on Nitrogen-Carbon cycle in environment.

G-428–**Advanced Genetics.** Four hours.

Prerequisites: BIO 101, 102, 401.

A continuation of BIO 401. Study of phenotypic effects of genes, of radiations and other mutagens, population genetics, speciation, microbial genetics, and regulations of gene motion.

G-436–**Interpretation of Biological Data.** Four hours.

Prerequisites: MAT 103, BIO 401.

Techniques applicable to the design and interpretations of biological research data.

G-440–**Physiological Genetics.** Four hours.

Prerequisite: BIO 401.

Recent advances in physiological genetics. Attention will be directed to literature on the nature of genes and to the interaction of heredity and environment in the expression of the characteristics of higher organisms.

G-441–**Microbiology of Water and Sewage.** Four hours.

Two hours lectures and two 2-hour laboratory periods per week.
Prerequisites: MIC 339, 340, and organic chemistry, or consent of instructor.

Control of purity water supply: sources and types of pollution and control of sewage disposal.

G-442–**An Introduction to Clinical Instrumentation.** Four hours.

This course is particularly designed for the advanced medical technologists, to familiarize them with instrumental procedures commonly encountered in modern medical technology. Particular emphasis will be placed on spectrophotometry (visible and UV determinations), flame photometry, and fluorescent antibody techniques.

G-444–**Advanced Microbiology Techniques.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: MIC 339, 340, and organic chemistry, or consent of instructor.

Special emphasis is placed on microbiological techniques beyond the scope of MIC 340.

G-447–**Advanced Pathogenic Microbiology.** Four hours.

Prerequisite: MIC 405.

Continuation of MIC G-405, on an advanced level; schemes for isolation and identification of major groups of disease producing organisms.

G-450–**Microorganisms in Health and Disease I.** Four hours.

Four hours lecture.
Course not designed for majors in the College of Science.

A comprehensive survey of the bacteria, viruses, rickettsiae, chlamydiae, yeasts, molds, protozoa and other human parasites, their relationship to man and his environment.

G-451–**Microorganisms in Health and Disease II.** Four hours.

A continuation of G-450.

A study of immunology, serology, and pathogenic microorganisms.

G-471–**Immunology and Serology.** Four hours.

Two lectures and two 2-hour laboratory periods per week.
Prerequisite: MIC G-405.

Studies of infection, resistance, types of immunity, hypersensitivity, and major techniques of diagnostic immumological reactions.

G-492–**Microbiological Problems I, II, III.** Two hours each.

Given only by special arrangement.

A course in special techniques, designed for majors with a need for certain basic microbiological techniques as tools for future research.

506–**Microbial Physiology.** Four hours.

Two hours lecture and two 2-hour laboratory periods per week.
Prerequisites: MIC 339, 340, and organic chemistry.

Introduction to concepts of microbial nutrition, metabolism, adaptation and genetics as related to growth and environment.

508—**Medical Mycology.** Four hours.

Four hours lecture per week.
Prerequisite: BIO G-425.

Consideration of the fungi of medical significance.

539—**Industrial Microbiology.** Four hours. Two quarter course.

An intensive study of yeasts, molds, and bacteria as they are applied in the production of amino acids, vitamins, steroids, enzymes, and organic acids and alcohols.

540—**Industrial Microbiology.** Four hours.

Continuation of MIC 539.

554—**Dynamics of Experimental Populations.** Four hours.

Prerequisites: BIO 401-G401, MIC 428-G-428, or permission of instructor.

Review of concepts associated with phylogeny with particular attention to factors associated with changes in population structure leading to the formation of species.

570—**Principles of Immunochemistry.** Four hours.

Prerequisite: MIC 471.

A study of the chemistry of antigens, antibodies and complement and the mechanism of their interaction. Advanced techniques and methods involved in the study of antigen-antibody reactions with emphasis on the quantitative aspects of serological reactions.

571—**Immunohematology.** Four hours.

Prerequisite: MIC 471.

A study of the serology, genetics and anthropological aspects of human blood groups, isoantigens and antibodies.

589—**Cytogenetics.** Four hours.

Two hours lecture and four hours laboratory per week.
Prerequisite: Consent of instructor.

Relationships between cytological and genetic systems.

592—**Special Problems in Microbiology I, II, III, IV.** Two hours each.

Prerequisite: A thorough background of microbiology.

Individuals will be assigned some specific problem in microbiology to investigate under faculty direction. Credit will be determined by the quality and

quantity of work done varying from two to maximum of eight hours.

596–**Microbiology Seminar I, II, III.** One hour each.

The presentation and defense of current, classical concepts and principles of microbiology.

597–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598–**Thesis.** Six hours.

791–**Research in Microbiology.** Credit to be arranged.

792–**Special Problems.** Four hours.

797–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798–**Dissertation.**

DEPARTMENT OF PHYSICS (PHY -- 360)

William E. Hughes, Chairman

Rayborn Folse Wood

The Department offers programs leading to the Master of Arts and the Master of Science degrees. For either degree, a minimum of forty-six (46) graduate hours is required. For the Master of Arts degree, a reading knowledge of either French, German, or Russian is required. For the Master of Science degree, the applicant must achieve proficiency in computer science, either through examination or by successfully completing CSS 210 and 311 or their equivalents.

A thesis is required for the Master of Arts and the Master of Science degrees. Research areas from which the thesis may be chosen include magnetic resonance, impurity states in semiconductors, atomic collisions, and viscous fluid flow.

The prospective beginning graduate student should have completed mathematics through differential equations and, in addition to introductory physics, courses in mechanics, electricity and magnetism, modern physics and optics. Students with inadequate preparation may be admitted but will be

expected to take some undergraduate make-up courses. Students who plan to do graduate work are expected to take the advanced physics portion of the Graduate Record Examinations.

COURSE DESCRIPTIONS (PHY – 360)

G-444–**Fundamentals of Solid State Physics.** Four hours.

Three hours lecture and one 3-hour laboratory period per week.
Prerequisite: Permission.

Study of the solid as an electromagnetic wave medium, excitation levels, and the one electron theory.

G-461, G-462, G-463–**Modern Physics.** Four hours each.

Prerequisites: PHY 381 and Mechanics.

Electromagnetic waves, electron emission, X-radiation, relativity, quantum theory, spectroscopy, wave mechanics, atomic and nuclear structure, and cosmic rays.

G-476–**The Physics of Waves.** Four hours.

Four lecture hours per week.
Prerequisite: Mechanics.

A treatment of waves in one, two, and three dimensions. Transverse waves, waves on a membrane, theory of elasticity, acoustic waves, diffraction, and spectrum analysis of waveforms.

G-481–**Nuclear Physics.** Four hours.

Prerequisite: PHY 381.

Nuclear binding forces, chain reaction, criticality, the non-steady state reactor, radiation shielding and detection.

G-485, G-486–**History and Literature of Physics.** Four hours each.

A survey of the history of physics from ancient times to 1900, stressing the rise and fall of concepts.
A survey of the influence of the concept of quanta and relativity and the modern laboratory findings which impinge upon these theories.

520, 521–**Quantum Mechanics I and II.** Four hours each.

Prerequisite: Permission.

The Schroedinger equation, operators and eigenfunctions, spherically symmetric systems, scattering theory, matrix mechanics, angular momentum and spin, perturbation theory and indentical particles.

571, 572, 573—**Theoretical Physics.** Four hours each.

Prerequisite: Permission.

Selected topics of general physics from an advanced point of view. Generally mathematical development of basic physical concepts.

574—**Special Topics in Theoretical or Experimental Physics.** Four hours.

Four lecture hours per week.
Prerequisite: Permission.

Subjects which may be studied under this heading depend upon current interests of students and staff. Will ordinarily be in areas for which no formal courses are offered.

591—**Research in Physics.** One to twelve hours.

594—**Seminar I, II, III, IV.** One hour each.

Prerequisite: Consent of the chairman of the department.

This course will be devoted to the study of current literature in physics and may be supplemented by laboratory research. The student will prepare and deliver one or more papers before the Department.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

DEPARTMENT OF POLYMER SCIENCE (PSC – 370)

Shelby F. Thames, Chairman

MASTER'S DEGREE PROGRAM

The Department of Polymer Science offers a Master of Science degree for which a minimum of forty-six (46) graduate hours in courses numbered above 500 is required.

COURSE DESCRIPTIONS (PSC – 370)

501, 502, 503—**Advanced Polymer Science.** Four hours.

An in-depth study of polymer forming reactions, their scope and limitation. Relationships between Mn, Mw, polymer structure and conformation to physical properties of polymers.

594–**Polymer Science Seminar.** One to six hours.

598–**Thesis.** One to ten hours.

610, 611–**Selected Topics in Polymer Science.** Four hours each.

To include a survey of such topics as thermally stable polymers, conducting polymers, silicone polymers, electro deposition polymers, radiation curing of polymers and the like.

620–**Characterization of Polymeric Materials.** Four hours.

A study of techniques employed in the characterization of macromolecules. To include such topics as light scattering, end group analysis, osmometry, polymer fractionation, NMR, I.R., U.V., and visible spectroscopy, thermo-analytical evaluation and mass spectrometry.

650, 651–**Organic Coatings.** Four hours each.

A study of film forming compositions to include such polymers as polyurethanes, polyesters, polyamides, polyimides.

DEPARTMENT OF SCIENCE EDUCATION (SCE -- 380)

Bobby N. Irby, Chairman

F. Brown I. Brown Craven Flowers Matthews Sonnier

The Department of Science Education recognizing the increased emphasis on the art of science teaching and the additional opportunities for individuals with advanced training in these arts provides a program for the Master of Education and the Doctor of Education degrees in science education.

In addition to the general requirements and procedures pertaining to graduate degrees as outlined in Part III and IV of this **Bulletin**, the following requirements must be fulfilled.

MASTER'S PROGRAM

1. Completion of fifty-eight (58) or sixty (60) quarter hours of graduate work.
2. A minimum of twenty-four (24) quarter hours in a specific science–biology, chemistry, geology, or physics.
3. A minimum of eight (8) quarter hours in related sciences.
4. Demonstration of competence in the following Professional Education areas:
   (a) Psychology of learning
   (b) History and philosophy of education
   (c) Statistical methods and procedures in education

(d) Research methods in education
(e) Guidance and educational testing
(f) Public School science curriculum
(g) Problems in science teaching

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty (20) quarter hours in professional education.

B. Thirty-eight (38) to forty-eight (48) quarter hours in the sciences and science education.

Approximately one-third of the graduate work will be in professional education and two-thirds in the sciences. Students with sufficient background are not required to take additional courses in professional education, but will complete their programs in the sciences.

A thesis carrying six quarter hours is optional and would substitute for two courses in education. The total program with thesis requires fifty-eight (58) quarter hours graduate credit. The thesis may involve research in a particular science or research education.

DOCTOR OF EDUCATION PROGRAM

1. Completion of seventy-two (72) quarter hours of graduate work above that accepted at the master's level.
2. A minimum of twenty-four (24) quarter hours in a specific science—biology, chemistry, earth science, or physics.
3. A minimum of eight (8) quarter hours in related science.
4. Competence in the areas of professional education as listed above.

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty-four (24) hours in professional education.

B. Thirty-two (32) or more hours in the sciences.

C. Twelve (12) or more hours in science education.

In all, two-thirds or more of the graduate work will be in the sciences and science education. In planning the overall program consideration is given to the student's background and his particular interests and goals.

Additional requirements include demonstrated proficiency in educational statistics and independent research. Research, culminating in a dissertation, may deal with a problem in the student's science speciality or a problem in science education.

In addition to an evaluation of the student's record, tests and examinations are used for diagnostic purposes in planning programs. The Graduate Record Examinations verbal and quantitative scores should be submitted with the

application for advanced graduate study. During the first or second quarter of study additional tests are administered by the Department and the College of Education and Psychology.

COURSE DESCRIPTIONS (SCE – 380)

G-400–**BSCS–Biology for Secondary Teachers.** Four hours.

Six hours lecture - laboratory work per week.
Prerequisite: Biology background or permission of the instructor.

A detailed critical examination of the subject matter, techniques, and methods for teaching biology in secondary schools, as proposed by the Biological Sciences Curriculum Study. Designed to orient teachers in modern biology subject matter and special techniques by presenting background material and special laboratory exercises. Emphasis is placed on the laboratory as the source of information from which sound conclusions can be drawn.

G-401–**CHEM–Chemistry for Secondary Teachers–Methods and Techniques.** Four hours.

Two hours lecture and four hours laboratory work per week.
Prerequisite: Chemistry background or permission of the instructor.

A course designed to familiarize chemistry teachers with the materials, methods, and techniques of teaching chemistry developed by the Chemical Education Material Study Committee. Unifying principles of chemistry are emphasized, with laboratory work providing the basis of development. Not allowable as credit toward degree requirements for chemistry majors.

G-402–**PSSC Physics for Secondary Teachers–Methods and Techniques.** Four hours.

Two hours lecture and four hours laboratory work per week.
Prerequisite: Physics background or permission of the instructor.

A course designed to familiarize physics teachers with methods, materials, and techniques of teaching physics developed by the Physical Science Study Committee. Not allowable as credit toward degree requirements for physics majors.

G-403–**Earth Science for Intermediate School Teachers.** Four hours.

Six hours lecture-laboratory work per week.
Prerequisite: Earth Science background or permission of the instructor.

A course designed to familiarize teachers with the materials, methods, and techniques developed by the Earth Sciences Curriculum Project. Emphasis is placed on laboratory and field work for data collection, and principles of other sciences as they relate to the study of the earth.

G-404—**Biological Sciences for Intermediate School Teachers.** Four hours.

A detailed critical examination of the subject matter, techniques, and methods for teaching the life sciences in a locally structured, student-oriented-classroom. Micro-teaching is provided to insure a new kind of teaching as required by new kinds of educational materials. This course may not be used to fulfill University core requirements.

G-405—**Physical Sciences for Intermediate School Teachers.** Four hours.

A detailed critical examination of the subject matter, techniques, and methods for teaching the various modern physical science curriculum project materials. This course will orient teachers with the philosophy of science as a tool of learning and emphasize the use of the laboratory as a tool of science. This course may not be used to fulfill University core requirements.

500—**Science Curriculum in the Public Schools.** Four hours.

Prerequisite: Permission of the instructor.

Involves a critical examination of the research, its implications, and trends in science course content. Course will include the use of seminars, research problems, independent study, advanced courses, etc., in the secondary schools.

501—**Problems in Science Teaching.** Four hours.

Prerequisite: Permission of the instructor.

A study of problems related to curriculum, methodology, activities, professionalism—scientific and educational, and evaluation in science teaching. Involves the examination of recent research in these areas.

502—**Techniques of Demonstrating and Experimenting with Scientific Principles.** Four hours.

Prerequisite: Permission of the instructor.

A course designed especially for general science teachers, considering fundamental aspects of biology, chemistry, geology, and physics. Provides for examination of modern material, equipment, and apparatus, and the use of the material in demonstrating and experimenting with scientific ideas.

510—**Physics for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

The physics course is designed principally for the purpose of providing teachers with a deeper knowledge of matter and energy and understading of their relationships. The course is organized around principles and general ideas (and their development) that can be directly applied to the elementary grade. Particular attention is given to quantitative processes pertaining to the understanding of the properties of matter and energy.

511—**Chemistry for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

In keeping with the current trends in chemistry teaching, major emphasis in this chemistry course will be placed upon: (1) relating ideas and facts; (2) understanding widely applicable principles; (3) placing heavy reliance upon laboratory work; (4) striving toward closer continuity between subject matter and pedagogy; and (5) deriving the necessary operational and conceptional definitions necessary to think about chemical systems. There will be a shift of emphasis from descriptive chemistry toward chemical principles to represent the changes in chemistry that have taken place over the last two decades.

512—**Biology for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

A course in general modern biology emphasizing the molecular aspects of animate matter.

513—**Earth Sciences for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

This course is designed to provide elementary teachers with a general background understanding of natural phenomena of the earth and its relationships in space. Particular emphasis is placed on those processes that are directly applicable to grades 1 through 6.

598—**Thesis.** Six hours.

791—**Research in Science Education.** One to twelve hours.

796—**Seminar.** Two hours each quarter for no more than three quarters. Meets for two hours weekly.

Discussion of current trends and practices in science education; invited speakers; and discussions of prospecti and research of current students in science education.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Disseration.**

SCHOOL OF BUSINESS ADMINISTRATION

Joseph A. Greene, Jr., Dean
Howard O. Jackson, Assistant Dean
Henry A. Gottleber, Coordinator of Graduate Studies

DEPARTMENTS AND GRADUATE DEGREE PROGRAMS

The School of Business Administration currently offers the following graduate degree programs: a Master of Business Administration, a Master of Science in Accounting, and a Master of Science or Master of Arts in Economics. The curricular requirements for each of these programs are detailed below, followed by graduate level course descriptions for each of the five departments within the School.

A prospective student should examine each degree program carefully as to its objective, course content, and prerequisites before deciding which to pursue.

Graduate fellowships are available in each of the degree program areas or fields of emphasis within the Master of Business Administration. Students with good undergraduate records are encouraged to apply for these at the time they apply for admission to the Graduate School. Ordinarily the student must have achieved a 3.0 average on his last two years of undergraduate work to be eligible.

GRADUATE DEGREE REQUIREMENTS

All of the general academic regulations and requirements outlined in Part IV of this **Bulletin** apply to students pursuing graduate work in the School of Business Administration. Specific requirements regarding prerequisites and courses are detailed under the outlined programs which follow. An applicant for admission who may be deficient in quality-point average or in his prerequisites may be admitted conditionally upon recommendation of his major professor, the Dean of the School of Business Administration, and the Dean of the Graduate School. If he is in doubt, he may make regular application and will be notified if his admission is regular, conditional, or if it is denied.

DEGREE PROGRAMS IN BUSINESS ADMINISTRATION

MASTER OF BUSINESS ADMINISTRATION

The Master of Business Administration program is primarily designed to prepare the student for a position of responsibility in business or industry. However, it is also used as preparatory graduate work for the doctoral degree or for teaching in junior colleges where a teaching certificate is not required. The program is broad in nature and aimed at developing general competence in overall management.

Research reveals that individuals with technical or other specialized degrees frequently discover that, after experiencing initially satisfying careers in their specialties, further promotions require a transition into the managerial area. The MBA program supplements the education of the specialist and should enable him to make the transition more readily. For this reason, the MBA program includes many students with undergraduate degrees in other fields as well as those who majored in business or economics as undergraduates.

The requirements for the Master of Business Administration degree may be completed in an academic year by the student who has graduated from an approved curriculum in a department or school of business and is exceptionally strong academically. Ordinarily the student spends a full calendar year completing the requirements.

The student who did his undergraduate work in some other field will have to spend additional time making up his deficiencies. Courses which are considered as definite prerequisites to the program are principles of accounting, principles of economics, and at least one course in each of the following fields: management, marketing, business law, business finance, and statistics. The major professor may ascertain other deficiences upon examination of a transcript.

A student who is deficient in these requirements may be allowed to remove the deficiency while doing graduate work provided that the undergraduate prerequisites of the specific graduate courses to be taken have been fulfilled.

A field emphasis may be taken in accounting, economics, finance, management, or marketing. A student who uses one of the curriculum courses in his field emphasis must substitute an acceptable course over 500 in another field in the curriculum.

The degree will be conferred upon candidates who (1) meet the general requirements of the Graduate School, (2) complete the special curriculum requirements as outlined below, and (3) pass an oral and/or written examination. A thesis is optional.

CURRICULUM REQUIREMENTS

	Hours
*ACCOUNTING 525 – Managerial Accounting	4
*ECONOMICS 515 – Managerial Economics	4
**ECONOMICS 520 – Quantitative Analysis for Decision Making	4
FINANCE 580 – Seminar in Finance	4
FINANCE 585 – Business Environment	4
MANAGEMENT 525 – Human Relations in Business	4
MANAGEMENT 570 – Business Policy	4
*MARKETING 535 – Seminar in Marketing	4
FIELD EMPHASIS	8
ELECTIVES OR THESIS	6
	46

*A student taking a major emphasis in accounting, economics, or marketing will make a proper substitution for the course in his department upon advice of his chairman.

Management 515, **Operations Research, may be substituted, especially by those students taking a field emphasis in management.

MASTER OF SCIENCE IN ACCOUNTING

The Master of Science in Accounting program is designed to prepare students for professional accounting positions in industry, government and public accounting. It may likewise be used as preparatory for additional graduate work at the doctorate level. It differs from the MBA degree in that it is more highly specialized and directed precisely to the discipline of accounting. In addition to the accounting curriculum requirements, this program requires one minor field of sixteen (16) hours which permits the student to pursue an in-depth study of a related discipline of his choosing.

CURRICULUM REQUIREMENTS

ACCOUNTING 505 – Advanced Accounting Theory	4
ACCOUNTING 510 – Advanced Problems in Public Accounting	4
ACCOUNTING 520 – Advanced Cost Accounting and Controllership	4
ACCOUNTING 530 – Tax Planning and Research	4
ACCOUNTING ELECTIVES	8
MINOR REQUIREMENTS	16
ELECTIVES OR THESIS	6
	46

MASTER OF ARTS OR MASTER OF SCIENCE IN ECONOMICS

The Department of Economics offers a program leading to a Master of Arts with a major in economics and a program leading to a Master of Science with a major in economics. The purpose of both programs is to prepare students for positions as economists in education, business, and government.

Under either program, the student must meet the general requirements of the Graduate School. There is no language requirement for a Master of Science degree and the thesis is optional with the student. A student pursuing the Master of Arts degree must demonstrate a proficiency in an approved foreign language and must also successfully complete an approved research project as evidenced by an accepted thesis. The specific requirements for the two degrees are listed below.

The recommended graduate minor in economics constitutes a systematic study of the economic environment in which we live. Several advanced undergraduate courses which have been designed to provide appropriate instruction in economics to students in other major fields may be taken for graduate credit.

In order to promote scholarship, fellowship, and the advancement of economics, all graduate students are encouraged to participate in the activities of the Economic Society, a student organization sponsored by the Department. Graduate students who qualify may be offered membership in Omicron Delta Epsilon (Artus), the national honorary economics society.

The recommended graduate minor in economics consists of Economics 500, 505, and two electives.

CURRICULUM REQUIREMENTS

	Hours
ECONOMICS 500—**Microeconomic Theory**	4
ECONOMICS 505—**Macroeconomic Theory**	4
ECONOMICS 510—**Monetary Theory**	4
ECONOMICS ELECTIVES	12
MINOR REQUIREMENTS	16
ELECTIVES OR THESIS	6
(Thesis is optional for Master of Science only)	46

COURSE DESCRIPTIONS

DEPARTMENT OF ACCOUNTING (ACC – 605)

Jerold J. Morgan, Chairman

Anderson Carpenter Cooley Cummings Dear
Estes Jackson Kenamond Torres

G-405—**Current Accounting Theory and Research.** Four hours.

Prerequisites: ACC 401, 402, 409, 429, or consent of instructor.

The study of current accounting problems, with special emphasis on the published bulletins (pronouncements) of professional accounting organizations.

G-410—**Auditing II.** Four hours.

Prerequisite: ACC 409.

A study of the principles and philosophy of auditing.

G-420—**Advanced Cost Accounting and Budgeting.** Four hours.

Prerequisite: ACC 320.

A study of the development of accounting data for managerial use, including budgetary procedures and control.

G-429—**Federal Income Tax Accounting I.** Four hours.

Prequisite: ACC 301 or consent of instructor.

An introductory course of income tax concepts applicable principally to individuals.

G-430—**Federal Income Tax Accounting II.** Four hours.

Prerequisite: ACC 429.

A continuation of ACC 429 with emphasis on research in taxation and guides for partnerships, estates, trusts, and corporations.

G-450—**Accounting Systems.** Four hours.

Prerequisite: ACC 409.

A study of the nature and procedure of systems work with attention given to the design and use of mechanical and computer oriented accounting systems.

G-460—**Consolidated Statements and Accounting for Fiduciaries.** Four hours.

Prerequisite: ACC 402 or consent of instructor.

An in-depth study of fiduciary accounting principles and reports, parent and subsidiary accounting including consolidations and mergers and foreign exchange.

G-470—**Municipal and Governmental Accounting.** Four hours.

Prerequisite: ACC 202.

An in-depth study of the principles and standards of governmental accounting, with emphasis on classification of accounts, fund accounting, statements, and reports.

G-492—**Research in Accounting Problems.** Four hours.

Prerequisite: Approval of instructor.

A seminar course for advanced study in problems in cost accounting, budgeting, auditing, income tax, or governmental accounting.

505—**Advanced Accounting Theory.** Four hours.

Prerequisites: 20 hours of accounting above accounting principles.

An extensive study of financial accounting literature including current areas of controversy.

510—**Advanced Problems in Public Accounting Practice.** Four hours.

Prerequisite: 20 hours of accounting above accounting principles including ACC 409 or equivalent.

A study of current topics in public accounting practice.

520—**Advanced Cost Accounting Problems and Controllership.** Four hours.

Prerequisite: 20 hours of accounting above accounting principles including ACC 320 or equivalent.

A study of the evolution of cost concepts and the controllership functions with emphasis on the current role of costs in managerial planning, control, and policy making.

525—**Managerial Accounting.** Four hours.

Prerequisite: Principles of Accounting.

A study of the potential managerial uses of accounting information for planning and control.

(Not to be taken by accounting emphasis students.)

530—**Tax Planning and Research.** Four hours.

Prerequisites: ACC 429 and 430 or equivalent.

A study of tax planning and reporting, the library of tax services, preparation of tax briefs, and client representation.

592—**Special Problems in Accounting.** Four hours.

Individual study of specific topics in accounting.

598—**Thesis.** Six hours.

DEPARTMENT OF ECONOMICS (ECO – 610)

Jack C. Wimberly, Chairman

Black Cameron Greene Housely Li
McQuiston Whitesell Williams

G-400—**Public Finance.** Four hours.
Prerequisite: ECO 255-256.

A study of federal and state spending and fund raising policies within the context of the social goals to be accomplished by such policies.

G-405—**Quantitative Analysis in Economics I.** Four hours.

Prerequisite: ECO 335 or 340 or consent of instructor.
Usually offered in alternate years.

A survey of mathematical concepts particularly suited for their application in economic theory of consumer behavior and theory of the firm.

G-406—**Quantitative Analysis in Economics II.** Four hours.

Prerequisite: ECO 405.
Usually offered in alternate years.

Design, estimation, and testing of mathematical models in economic theory, with emphasis on microeconomics.

G-420—**Economics of Public Utilities.** Four hours.

Prerequisite: ECO 255-256.
Usually offered in alternate years.

A study of the development, institutional bases, structure, and regulation of public utilities.

G-430—**Economics of Urban Areas.** Four hours.

Prerequisite: ECO 255-256 or consent of instructor.
Usually offered in alternate years.

A study of the economic problems of urban areas, with special reference to the problem of urban land utilization and the spending and fund-raising problems of municipal governments.

G-435—**International Trade Theory.** Four hours.

Prerequisite: ECO 255-256.

A study of the historical development of international trade theory, the importance of international trade, the mechanism of international payments and modern theories dealing with the subject.

G-436—**International Economic Relations.** Four hours.

Prerequisite: ECO 435 or consent of the instructor.

A study of the problems and policies arising out of international economic relations and practices.

G-440—**Economic Development.** Four hours.

Prerequisite: ECO 255-256.

A study of the nature, causes, and effects of regional and national economic development.

G-460—**Fiscal Theory.** Four hours.

Prerequisite: ECO 345.
Usually offered in alternate years.

A study of the theoretical bases for governmental fiscal operations.

G-470—**Comparative Economic Systems.** Four hours.

Prerequisite: ECO 255-256.

A course designed to acquaint the student with the origins, development, and characteristics of fascism, socialism, communism, and capitalism.

500—**Microeconomic Theory.** Four hours.

Prerequisite: ECO 340.

An advanced study of the theory of price.

505—**Macroeconomic Theory.** Four hours.

Prerequisite: ECO 345.

An advanced study of the theories of income and employment, general equilibrium, and growth.

510–**Monetary Theory.** Four hours.

Prerequisite: ECO 330.

An advanced study of the determination of the level of prices and of alternative monetary and fiscal policies in the light of social goals.

515–**Managerial Economics.** Four hours.

An advanced study involving theory and actual cases in the application of economic analysis to the solution of business problems.

520–**Statistics for Quantitative Analysis.** Four hours.

Prerequisites: ECO 301 and 302, or equivalent.

The application of statistical procedure to business problems.

530–**History of Economic Thought I.** Four hours.

A study of the development of economic theories from Aristotle through the critics of the classical tradition.

531–**History of Economic Thought II.** Four hours.

A study of economic doctrines from the marginal revolution to Keynes. (Non-economic majors are advised to take Economics 531 rather than 530.)

550–**Problems in Political Economy.** Four hours.

Prerequisite: Consent of the instructor.

565–**Advanced Labor Economics.** Four hours.

Prerequisite: ECO 365 or consent of instructor.

An advanced study of wage and employment theory, unionism, and current labor force problems.

592–**Special Problems.** Four hours.

597–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598–**Thesis.** Six hours.

DEPARTMENT OF FINANCE (FIN – 615)

Louis K. Brandt, Chairman

Clements Jordan King Sirmon West

530–**Problems in Finance.** Four hours.

Application of tested and experimental financial theory by financial managers to decision making problems relating to working capital and fixed capital management. Some emphasis placed upon quantitative tools and techniques for analysis and decision making.

540–**Managing Financial Institutions.** Four hours.

Gives the student an understanding of all of the major financial institutions, their organizational structures, functions, interrelationships, and methods of operation.

552–**Problems in Investments.** Four hours.

Application of tested and experimental theories by investment managers to problems of short and long-term decision making. Some emphasis upon quantitative tools and techniques applied to optimal investment goals.

580–**Seminar in Finance.** Four hours.

A study of selected problems in business finance. Outside research and class discussion of research projects.

585–**The Business Environment.** Four hours.

The relevant environmental pressures shaping the corporation are explored: government, labor, values and ethics, innovation and technology.

592–**Special Problems.** Four hours.

This is a closely supervised course in individual study and research, emphasizing some issue of special interest to the student that falls within the scope of materials that are taught in the department.

597–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598–**Thesis.** Six hours. Credit deferred until thesis is completed.

DEPARTMENT OF MANAGEMENT (MGT – 620)

Martin Stegenga, Chairman

Bracey Davis Gottleber Moore Sanford Sweat

G-468–Wage and Salary Administration. Four hours.

Prerequisite: MGT 360.

A study of wage and salary levels and structures including job analysis, job evaluation, wage surveys, and incentive systems..

G-472–Collective Bargaining. Four hours.

Prerequisite: MGT 370.

A study of the practices, techniques, procedures, methods, and legal and administrative requirements of collective bargaining relationships.

G-482–Production Problems Seminar. Four hours.

Prerequisite: Consent of instructor.

A case approach to the student of selected current problems in manufacturing management.

G-484–Problems in Personnel Administration. Four hours.

Prerequisite: Consent of instructor.

An application through problem solving and case analysis of. the principles and techniques in personnel administration decision making.

510–Production Management. Four hours.

Prerequisite: Permission of department chairman.

An analysis of managerial production functions and processes by focusing upon the transformation of inputs into goods and services. Input factors of management, materials and land, labor, and capital will be interrelated with production functions.

515–Operations Research. Four hours.

Prerequisite: Permission of department chairman.

An introductory course in the principles of Operations Research and Management Science.

520–Problems in Managment. Four hours.

A case study of selected social, economic, industrial, and personnel problems.

525—**Human Relations in Business.** Four hours.

A study of the problems of individuals and groups resulting from modern business organizations and techniques.

530—**Survey of Labor-Management Relations.** Four hours.

Prerequisite: Permission of the chairman of the Department of Management.

A survey of the development and contemporary state of industrial relations, labor law, and collective bargaining.

560—**History and Philosophy of Management.** Four hours.

A review and analysis of the writings of Taylor, Gilbreth, Fayol, and later writers in the development of scientific and modern management.

565—**Organization Theory and Practice.** Four hours.

The design, analysis, and evaluation of organizational structures in a business environment. Included are contemporary developments in the behavioral sciences, communications, quantitative and scientific management.

570—**Business Policy.** Four hours.

Prerequisite: Completion of 24 hours of graduate work.

A study of the fields of policy-making and administration from a top management point of view. It integrates special fields of analysis and stresses the overall point of view in handling business problems.

592—**Special Problems in Management.** Four hours.

Prerequisite: Permission of department chairman.

598—**Thesis.** Six hours.
For students taking a management emphasis in the MBA program.

DEPARTMENT OF MARKETING (MKT – 625)

Richard C. Vreeland, Chairman

Schoell Stevens

G-410—**Market Research.** Four hours.

Prerequisites: MKT 300 and MAT 320.

A study of principles and techniques used in market research and evaluation of such research.

G-475—**Promotion Development. Four hours.**

A study of the relationship of the business organization to the various interest groups which affect its promotional results, and the policies and procedures utilized in connection with such groups.

G-480—**Marketing Management.** Four hours.

A comprehensive course designed to synthesize the more specialized marketing knowledge of the student. The interrelation of all marketing activities in reaching the firms objectives is emphasized through the study of case histories.

535—**Seminar in Marketing.** Four hours.

Advanced study of marketing theories and phenomena.

540—**Market Planning.** Four hours.

A case study of the methods used by firms to reach their marketing goals.

550—**Market Research Seminar.** Four hours.

A study of advanced research techniques used in market analysis.

560—**Seminar in Marketing Theory.** Four hours.

A survey, analysis, and evaluation of the current research in marketing theory. Detailed attention is given to problems of determining the meaning and boundaries of marketing theory. The functional, psychological, and historical approaches are utilized. Emphasis is placed on the substantial content of marketing theories and their methodologies.

592—**Special Problems in Marketing.** Four hours.

598—**Thesis.** Six hours.

SCHOOL OF FINE ARTS

Raymond Mannoni, Dean

Gomer Pound, Assistant Dean

The School of Fine Arts currently offers graduate programs leading to the degrees of Master of Art Education, Master of Music, Master of Music Education, and Master of Arts. The Master of Music degree may be earned either in applied music, church music, conducting, music history and literature, or in theory-composition. The Master of Arts may be earned in theatre.

The School of Fine Arts offers the Doctor of Philosophy and the Doctor of Music Education degrees in music education.

Prescribed curricula for master's degree programs are listed below. As can be seen, they provide for some latitude and flexibility in arranging individual degree programs. Course selections must be approved by the student's advisory committee. The student's major professor will assist in every way possible, but final responsibility for following all general departmental regulations lies with the student.

Tests and Auditions

Examinations for advisory purposes are given to all new master's students during registration week and prior to their enrollment. New master's students should contact their coordinator or department chairman for a schedule of these examinations. Auditions for applied music majors are given at the same time. Approval of the graduate faculty in music must be obtained before a student is permitted to major in an applied music field.

Ensemble Participation

All graduate music students are required to participate in at least one ensemble each quarter they are in residence.

Deficiencies

The School of Fine Arts retains the right to determine deficiencies in the preparation of any graduate student, regardless of the number of course credits accumulated. The School will recommend appropriate means of removing such deficiencies.

ALLIED ARTS (AA – 655)

AA 500–Aesthetics in the Arts. Four hours.

A study of the formulation of aesthetic tastes. Emphasis is placed upon an analysis of artistic expression and the affective quality of experiences with the Fine Arts.

DEPARTMENT OF ART (ART -- 660)

Walter Lok, Chairman

Ward

ART 551—**Painting Studio.** Four to twelve hours.

ART 552—**Drawing Studio.** Four to twelve hours.

ART 553—**Ceramic Studio.** Four to twelve hours.

DEPARTMENT OF ART EDUCATION (ARE – 665)

William H. Poirier, Chairman

Ryan

MASTER OF ART EDUCATION DEGREE

	Hours
Seminar in Elementary Art Education and Supervision	4
Seminar in Secondary Art Education and Supervision	4
Research in Art Education	2
Aesthetics (AA 500 or PHI G-446)	4
Studio Research: 12 hours in one area, 8 hours selected from remaining studio offerings	20
Select one course from: CIF 509 (Social Foundations of Education), CIF 504 (Foundations in American Education), EPY 510 (Advanced Educational Psychology)	4
Trends in Current Plastic Expression	4
Thesis	6
TOTAL	48

COURSE DESCRIPTIONS (ARE – 665)

ARE 501—**Research in Art Education.** Two hours.

A study of current research and research techniques in the area; includes the compilation of bibliographic material and the organization of research projects.

ARE 515—**Trends in Current Plastic Expression.** Four hours.

A course designed to keep the student abreast of current trends in the plastic arts.

ARE 525—**Seminar in Elementary Art Education and Supervision.** Four hours.

A study of the problems of teaching and supervising the public school program in art in grades K through six.

ARE 526—**Seminar in Secondary Art Education and Supervision.** Four hours.

A study of the problems of teaching and supervising the public school program in art in grades seven through twelve.

ARE 592—**Special Studies in Art Education I, II, III.** One to three hours each.

ARE 597—**Independent Study and Research.** Hours arranged.

ARE 598—**Thesis.** Six hours.

A conventional thesis, or a catalogued exhibition, or an exhibition with a supporting paper.

MASTER'S DEGREE PROGRAMS IN MUSIC AND MUSIC EDUCATION

Joe Barry Mullins, Coordinator

MASTER OF MUSIC DEGREE IN APPLIED MUSIC

Applied Music . . . . . 15 quarter hours.
Recital 515 . . . . . 0 quarter hours.
Selected work from the following . . . . . 31 quarter hours.
Total . . . . . 46 quarter hours.

Music Theory (Minimum of 6 quarter hours)
- MUS G-411, G-412, G-413—Advanced Composition . . . . . (2-2-2)
- MUS 511, 512—Pedagogy of Theory . . . . . (2-2)
- MUS 521, 522, 523—Analytical Techniques . . . . . (2-2-2)

Music History and Literature (Minimum of 6 quarter hours)
- MUS G-431—History of Opera . . . . . (4)
- MUC G-432—American Music . . . . . (4)
- MUS G-433—20th Century Music . . . . . (4)
- MUS G-435—Baroque Music . . . . . (4)
- MUS G-436—18th Century Music . . . . . (4)
- MUS G-437—19th Century Music . . . . . (4)
- MUS G-441A, G-442A, G-443A—Vocal Literature . . . . . (2-2-2)
- MUS G-441B, G-442B, G-443B—Piano Literature . . . . . (2-2-2)
- MUS G-441C, G-442C, G-443C—Organ Literature . . . . . (2-2-2)
- MUS G-441D, G-442D, G-443D—Instrumental Literature . . . . . (2-2-2)
- MUS G-441E, G-442E, G-443E—Choral Literature . . . . . (2-2-2)
- MUS G-441F, G-442F, G-443F—Symphonic Literature . . . . . (2-2-2)
- MUS G-441H, G-442H, G-443H—Chamber Music . . . . . (2-2-2)
- MUS G-462—Hymnology . . . . . (4)
- MUS 550—Seminar in the History of Church Music . . . . . (4)
- MUS 551—Liturgies . . . . . (2)
- MUS 552—Gregorian Chant . . . . . (2)
- MUS 561, 562, 563—Seminar in Music Literature . . . . . (2-2-2)

Electives
- MUS G-463—Administration of Church Music . . . . . (2)
- MUS 516—Research Essay . . . . . (3)
- MUS 520—Musical Acoustics . . . . . (4)
- MUS 592—Special Studies I, II, III . . . . . (1-3 hours each)*
- MED 516—Music Programs for Community and Junior Colleges . . (4)
- MED 532—Graduate Conducting I . . . . . (2)
- MED 555—Psychology of Music . . . . . (4)
- AA 500—Aesthetics in the Arts . . . . . (4)
- Study in a cognate area . . . . . (8)

MASTER OF MUSIC DEGREE IN CHURCH MUSIC

	Hours
REL G-408, G-409—History of Christian Culture	8
MUS 550—Seminar in History of Church Music	4
MUS 551—Liturgies	2
MED 598*—Thesis, or MUS 514*—Composition in a Large Form	6
Applied Music Major (Organ, Voice, and Conducting)	6
Applied Music Minor	3
Selected work from the following	17
Total	46

Music Theory (Minimum of six quarter hours)
- MUS G-411, G-412, G-413—Advanced Composition . . . . . (2-2-2)
- MUS 511—Pedagogy of Theory . . . . . (2)
- MUS 521, 522, 523—Analytical Techniques . . . . . (2-2-2)
- MUS 587—Arranging for School Choruses . . . . . (2)

Music History and Literature (Minimum of six quarter hours)
- MUS G-432—American Music . . . . . (4)
- MUS G-433—20th Century Music . . . . . (4)
- MUS G-435—Baroque Music . . . . . (4)
- MUS G-436—18th Century Music . . . . . (4)
- MUS G-437—19th Century Music . . . . . (4)
- MUS G-441C, G-442C, G-443C—Organ Literature . . . . . (2-2-2)
- MUS G-441E, G-442E, G-443E—Choral Literature . . . . . (2-2-2)
- MUS G-462—Hymnology . . . . . (4)
- MUS 552—Gregorian Chant . . . . . (2)
- MUS 561, 562, 563—Seminar in Music Literature . . . . . (2-2-2)

Electives
- MUS G-463—Administration of Church Music . . . . . (2)
- MUS 516—Research Essay . . . . . (3)
- MUS 520—Musical Acoustics . . . . . (4)
- MUS 592—Special Studies I, II, III . . . . . (1-3 each)
- MED 512—Advanced Topics in Vocal Music . . . . . (2)
- MED 532—Graduate Conducting I, II, III* . . . . . (2-2-2)
- MED 555—Psychology of Music . . . . . (4)
- AA 500—Aesthetics in the Arts . . . . . (4)

*Eight hours of electives may be taken in lieu of this requirement.
**A student whose major is either organ or voice must take at least two quarter hours of graduate conducting.

MASTER OF MUSIC DEGREE IN CONDUCTING

	HOURS
MUS 515—Recital (Conducting of major works)	0
MUS 516—Research Essay	3
MUS 630—History of Style	4
MUS 696—Seminar in Performance Practices	2
MED 532—Graduate Conducting I, II, III	6
Applied Music	3
Selected work from the following	28
Total	46

Music History and Literature (Minimum of ten quarter hours)

MUS G-431—History of Opera	(4)
MUS G-432—American Music	(4)
MUS G-433—20th Century Music	(4)
MUS G-435—Baroque Music	(4)
MUS G-436—18th Century Music	(4)
MUS G-437—19th Century Music	(4)
MUS G-441E, G-442E, G-443E—Choral Literature	(2-2-2)
MUS G-441F, G-442F, G-443F—Symphonic Literature	(2-2-2)
MUS G-441H, G-442H, G-443H—Chamber Music	(2-2-2)
MUS G-462—Hymnology	(4)
MUS 551—Liturgies	(2)
MUS 552—Gregorian Chant	(2)
MUS 561, 562, or 563—Seminar in Music Literature	(2)
MUS 593—Notation	(4)
MUS 536—Band Literature	(2)

Music Theory (Minimum of six quarter hours)

MUS G-411, G-412, G-413—Advanced Composition	(2-2-2)
MUS 511, 512,—Pedagogy of Theory	(2-2)
MUS 521, 522, 523—Analytical Techniques	(2-2-2)
MUS 586—Arranging for School Bands	(2)
MUS 587—Arranging for School Choruses	(2)
MUS 588—Arranging for School Orchestras	(2)

Music and Music Education

MUS G-436—Administration of Church Music	(2)
MUS 500—Introduction to Research	(2)
MUS 520—Musical Acoustics	(4)
MUS 592—Special Studies I, II, III	(1-3 each)
MED G-423A—Curriculum Problems in Music Education	(2)
MED G-423B—Organization and Administration of School Orchestras and Bands	(2)

MED 510–Advanced Topics in Instrumental Music . . . . . (2)
MED 512–Advanced Topics in Vocal Music . . . . . (2)
MED 514–Organization and Administration of School Music Programs . . . . . (4)
MED 516–Music Programs for Community and Junior Colleges . . (4)
MED 525, 526, 527–Seminar in Music Education . . . . . (2-2-2)
MED 555–Psychology of Music . . . . . (4)
MED 556, 557–Evaluation and Guidance in Music Education . . . . (2-2)
Applied Music . . . . . (1-1-1)
AA 500–Aesthetics in the Arts . . . . . (4)
Study in a cognate area . . . . . (8)

MASTER OF MUSIC DEGREE IN MUSIC HISTORY AND LITERATURE

MUS 500, 501–Introduction to Research . . . . . 4 quarter hours
MUS 521, 522, 523–Analytical Techniques . . . . . 6 quarter hours
MUS 593–Notation . . . . . 4 quarter hours
MED 598–Thesis . . . . . 6 quarter hours
Applied Music . . . . . 3 quarter hours
Selected work from the following . . . . . 23 quarter hours
Total . . . . . 46 quarter hours

Music History and Literature Core Courses (Minimum of 12 quarter hours)

MUS G-431–History of Opera . . . . . (4)
MUS G-432–American Music . . . . . (4)
MUS G-433–20th Century Music . . . . . (4)
MUS G-435–Baroque Music . . . . . (4)
MUS G-436–18th Century Music . . . . . (4)
MUS G-437–19th Century Music . . . . . (4)
MUS 561, 562, 563–Seminar in Music Literature . . . . . (2-2-2)

Electives

MUS G-441A, G-442A, G-443A–Vocal Literature . . . . . (2-2-2)
MUS G-441B, G-442B, G-443B–Piano Literature . . . . . (2-2-2)
MUS G-441C, G-442C, G-443C–Organ Literature . . . . . (2-2-2)
MUS G-441D, G-442D, G-443D–Instrumental Literature . . . . . (2-2-2)
MUS G-441E, G-442E, G-443E–Choral Literature . . . . . (2-2-2)
MUS G-441F, G-442F, G-443F–Symphonic Literature . . . . . (2-2-2)
MUS G-441H, G-442H, G-443H–Chamber Music . . . . . (2-2-2)
MUS 520–Musical Acoustics . . . . . (4)
MUS 550–Seminar in the History of Church Music . . . . . (4)
MUS 551–Liturgies . . . . . (2)
MUS 552–Gregorian Chant . . . . . (2)
MUS 592–Special Studies I, II, III, ... (1-3 each)
MED 536–Band Literature . . . . . (2)
MED 555–Psychology of Music . . . . . (4)
AA 500–Aesthetics in the Arts . . . . . (4)
Study in a cognate area . . . . . (8)

MASTER OF MUSIC DEGREE IN THEORY-COMPOSITION

MUS G-411, G-412, G-413—Advanced Composition . . . . . 6 quarter hours
MUS 514—Composition in a Large Form, or MED 598—Thesis . 6 quarter hours
MUS 521, 522, 523—Analytical Techniques . . . . . 6 quarter hours
Applied Music . . . . . 3 quarter hours
Selected work from the following . . . . . 25 quarter hours
Total . . . . . 46 quarter hours

Music History and Literature (Minimum of 6 quarter hours)
- MUS G-431—History of Opera . . . . . (4)
- MUS G-432—American Music . . . . . (4)
- MUS G-433—20th Century Music . . . . . (4)
- MUS G-435—Baroque Music . . . . . (4)
- MUS G-436—18th Century Music . . . . . (4)
- MUS G-437—19th Century Music . . . . . (4)
- MUS G-441A, G-442A, G-443A—Vocal Literature . . . . . (2-2-2)
- MUS G-441B, G-442B, G-443B—Piano Literature . . . . . (2-2-2)
- MUS G-441C, G-442C, G-443C—Organ Literature . . . . . (2-2-2)
- MUS G-441D, G-442D, G-443D—Instrumental Literature . . . . . (2-2-2)
- MUS G-441E, G-442E, G-443E—Choral Literature . . . . . (2-2-2)
- MUS G-441F, G-442F, G-443F—Symphonic Literature . . . . . (2-2-2)
- MUS G-441H, G-442H, G-443H—Chamber Music . . . . . (2-2-2)
- MUS G-462—Hymnology . . . . . (4)
- MUS 550—Seminar in the History of Church Music . . . . . (4)
- MUS 551—Liturgies . . . . . (2)
- MUS 552—Gregorian Chant . . . . . (2)
- MUS 561, 562, 563—Seminar in Music Literature . . . . . (2-2-2)

Electives
- MUS 511, 512—Pedagogy of Theory . . . . . (2-2)
- MUS 513—Seminar in Music Theory . . . . . (2)
- MUS 520—Musical Acoustics . . . . . (4)
- MUS 592—Special Studies I, II, III . . . . . (1-3 each)
- MED 516—Music Programs for Community and Junior Colleges . . (4)
- MED 532—Graduate Conducting I . . . . . (2)
- MED 555—Psychology of Music . . . . . (4)
- AA 500—Aesthetics in the Arts . . . . . (4)
- Applied Music . . . . . (1-1-1)
- Study in a cognate area . . . . . (8)

MASTER OF MUSIC EDUCATION DEGREE

MED 525, 526, 527—Seminar in Music Education . . . . . 6 quarter hours
*MED 598—Thesis . . . . . 6 quarter hours
Applied Music . . . . . 3 quarter hours
Selected work from the following . . . . . 31 quarter hours
Total . . . . . 46 quarter hours

Music Education (Minimum of 10 quarter hours)
- MED G-423A—Curriculum Problems in Music Education . . . . . (2)
- MED G-423B—Organization and Administration of School Orchestra and Bands . . . . . (2)
- MED G-425—Advanced Strings Methods . . . . . (2)
- MED G-427—Advanced Winds Methods . . . . . (2)
- MED G-429—Percussion Methods . . . . . (2)
- MED 510—Advanced Topics in Instrumental Music . . . . . (2)
- MED 512—Advanced Topics in Vocal Music . . . . . (2)
- MED 514—Organization and Administration of School Music Programs . . . . . (2)
- MED 516—Music Programs for Community and Junior Colleges . . (4)
- MED 532—Graduate Conducting I . . . . . (2)
- MED 536—Band Literature . . . . . (2-2)
- MED 555—Psychology of Music . . . . . (4)
- MED 556, 557—Evaluation and Guidance in Music Education I, II . (2-2)
- MUS 592—Special Studies I, II, III . . . . . (1-3 each)
- MUS G-441E, G-442E, G-443E—Choral Literature . . . . . (2-2-2)
- Applied Music . . . . . (1-1-1)

Electives: (Minimum of 6 quarter hours in Theory and 6 in History or Literature)
- MUS G-431—History of Opera . . . . . (4)
- MUS G-432—American Music . . . . . (4)
- MUS G-433—20th Century Music . . . . . (4)
- MUS G-435—Baroque Music . . . . . (4)
- MUS G-436—18th Century Music . . . . . (4)
- MUS G-437—19th Century Music . . . . . (4)
- MUS 500—Introduction to Research . . . . . (2)
- MUS 511, 512—Pedagogy of Theory . . . . . (2-2)
- MUS 520—Musical Acoustics . . . . . (4)
- MUS 521, 522, 523—Analytical Techniques . . . . . (2-2-2)
- MUS 561, 562, 563—Seminar in Music Literature . . . . . (2-2-2)
- MUS 586, 587, 588—Arranging for School Bands, Choruses, and Orchestras . . . . . (2-2-2)
- AA 500—Aethetics in the Arts . . . . . (4)
- Study in a cognate area . . . . . (8)

*Eight hours of electives in music may be taken in lieu of thesis.

DOCTORAL PROGRAMS IN MUSIC EDUCATION

Merton S. Zahrt, Coordinator

The degrees of Doctor of Philosophy in Music Education and Doctor of Music Education are offered to candidates who pursue the course of study with distinction and who show ability to do research and scholarly study. General

requirements for the Ph.D. and Ed.D.(the D.M.Ed. general requirements are the same as the Ed.D.) degrees are found in Part IV of this **Bulletin**. The School of Fine Arts further stipulates the following requirements.

ADMISSION: An applicant for admission to doctoral study in music education must possess a master's degree in music education, or its equivalent, from an approved institution. A complete record of previous education and experience, accompanied with recommendations from responsible persons who are personally acquainted with the applicant and his work are required to support all applications for admission to doctoral study in music education. A personal interview may be required by the School of Fine Arts. Each applicant must have at least three years' successful teaching experience. If the degree work is concerned with college administration, the applicant must have at least three years' experience in a college or university or equivalent.

RESEARCH TOOLS: Candidates for the Ph.D. degree in music education must comply with the language requirements as specified for Ph.D. candidates in Part IV of this **Bulletin**. A candidate for the D.M.Ed. degree is required to demonstrate proficiency in statistics or computer science. At the discretion of the graduate faculty, this candidate may be required to demonstrate a reading knowledge of one modern foreign language.

All doctoral candidates in music education are required to take MED 514 (Organization and Administration of School Music Programs), MUS 630 (History of Study of Music), MUS 696 (Seminar in Performance Practices), and MED 625, 626 (Doctoral Seminar in Music Education). The remaining course work will be determined in light of the candidate's qualifying examination, his interests, and the counsel of his major professor and advisory committee. In planning this program, the following minimum distribution of graduate courses (including master's degree work) is required: thirty-six (36) hours in music education, sixteen (16) to eighteen (18) hours in musicology, sixteen (16) to eighteen (18) hours in music theory, twelve (12) hours in education, and thirty-six (36) to thirty-eight (38) hours of approved electives. Although Part IV of this **Bulletin** states that 118 hours are required for doctoral degrees, it should be clearly understood that few candidates are able to receive a degree on the basis of this minimum. The distinction implied by the degree and the traditions relating to it require comprehensive knowledge and demonstration of a high degree of proficiency in the major field and related areas of study, as well as the ability to conduct advanced research.

A booklet of policies and procedures set up by the School is available from the Coordinator. This publication outlines in greater detail the steps required in the doctoral programs.

COURSE DESCRIPTIONS

APPLIED MUSIC AND ORGANIZATIONS (APM – 670)

501-502-503–**Piano.** One to five hours each quarter.

511-512-513—**Organ.** One to five hours each quarter.

521-522-523—**Strings (Violin or 'Cello).** One to five hours each quarter.

531-532-533—**Woodwinds.** One to five hours each quarter.

541-542-543—**Brass.** One to five hours each quarter.

551-552-553—**Percussion.** One to five hours each quarter.

561-562-563—**Voice.** One to five hours each quarter.

DEPARTMENT OF MUSIC (MUS – 675)

David Foltz, Chairman

Andersen	Benner	Donohue	Fitch	A. Gower	Guibbory
Hill	Huck	Imbragulio	Mannoni	Mullins	Nichols
Nowakowski		Overmyer	Presser	Stocker	Yestadt

COURSE DESCRIPTIONS (MUS – 675)

G-411, G-412, G-413—**Advanced Composition.** Two hours each.

Writing in larger forms for various choral and instrumental combinations.

G-431—**History of Opera.** Four hours.

The history of musical theatre from Greek drama to present. Open to non-music majors with consent of instructor.

G-432—**American Music.** Four hours.

A study of the development of music in North America with particular emphasis in three areas; (1) European heritage, (2) jazz, (3) composers of the twentieth century whose idioms evidence strong roots in American culture. Open to non-music majors with consent of instructor.

G-433—**20th Century Music.** Four hours.

Examination of musical trends since Debussy and Mahler. Open to non-music majors with consent of instructor.

G-435—**Baroque Music.** Four hours.

The development of musical styles and forms from Monteverdi through J. S. Bach.

G-436—**18th Century Music.** Four hours.

The development of classical styles and forms, with particular emphasis on **style gallant**, the Mannheim school, **Empfindsamer Stil**, and the Viennese classicists.

G-437—**19th Century Music.** Four hours.

The development of musical romanticism, with emphasis on the transformation and expansion of classical forms and the appearance of new formal and stylistic concepts.

G-441A, G-442A, G-443A—**Vocal Literature.** Two hours each.

G-441B, G-442B, G-443B—**Piano Literature.** Two hours each.

G-441C, G-442C, G-443C—**Organ Literature.** Two hours each.

G-441D, G-442D, G-443D—**Instrumental Literature.** Two hours each.

G-441E, G-442E, G-443E—**Choral Literature.** Two hours each.

A survey of accompanied and unaccompanied choral music from Gregorian chant to the present. Open to non-music majors with consent of instructor.

G-462—**Hymnology.** Four hours.

The history of the Christian hymn from its roots to present-day forms.

G-463—**Administration of Church Music.** Two hours.

Practical aspects of church music are presented in this course, such as building a church library, organizing and directing various church choirs, the volunteer choir system, directing from the console, etc.

G-441F, G-442F, G-443F—**Symphonic Literature.** Two hours each.

The history and literature of the symphony orchestra from 1600 to the present. Open to non-music majors with consent of instructor.

G-441H, G-442H, G-443H—**Chamber Music.** Two hours each.

A survey of music for small instrumental ensembles. Open to non-music majors with consent of instructor.

500, 501—**Introduction to Research.** Two hours each.

The study of research techniques: bibliographical compilation; investigation of standard reference literature; writing of research papers. The second quarter investigates more thoroughly those areas of research of particular interest to students of musicology.

511, 512—**Pedagogy of Theory.** Two hours each.

A course in the teaching of theory.

513—**Seminar in Music Theory.** Two hours.

Prerequisite: Theory-Composition major, or consent of instructor.

514—**Composition in a Large Form.** Six hours.

Open to students with a major in theory-composition.

515—**Recital.** O hours.

Required for a major in applied music. The candidate must be granted approval to present his recital by an auditioning committee made up of the applied faculty of the major area and representatives of the music graduate faculty at least five weeks prior to the recital date.

516—**Research Essay.** Three hours.

520—**Musical Acoustics.** Four hours.

An investigation into the nature and preception of musical sounds designed to lead to a better understanding of problems of tone production, intonation, and allied musical aspects.

521, 522, 523—**Analytical Techniques.** Two hours each quarter.

A course in the techniques of harmonic and contrapuntal analysis.

550—**Seminar in History of Church Music.** Four hours.

551—**Liturgies.** Two hours.

Liturgy in worship: the Jewish, Eastern Orthodox, and Roman Catholic liturgies and their music; liturgies of the Reformation period; music of the Lutheran, Calvinist, and Anglican churches; music of non-liturgical churches.

552—**Gregorian Chant.** Two hours.

This course is designed to acquaint the student with the history and development of Gregorian chant, with literature and recordings for demonstration purposes. Practical experience in conducting Gregorian chant is offered also.

561, 562, 563—**Seminar in Music Literature.** Two hours each.

Study of music of individual composers, or of special areas of music literature.

586—**Arranging for School Bands.** Two hours.

587—**Arranging for School Choruses.** Two hours.

588—**Arranging for School Orchestras.** Two hours.

592—**Special Studies I, II, III.** One to three hours each.

Investigation of specialized areas of interest within the broad field of music, with emphasis on individual research. A committee of not less than three graduate faculty is appointed to evaluate the results of each study.

593—**Notation.** Four hours.

Study of the forms of musical notation from the Middle Ages to the present day, with particular emphasis on the notation of polyphonic music prior to 1600.

630—**History of Style in Music.** Four hours.

Detailed analysis of selected musical works from antiquity to the 20th century. Special emphasis is placed upon the identification of style determinants. Doctoral students and conducting majors only.

692—**Special Studies I, II, III.** One to three hours each.

Doctoral students only.

696—**Seminar in Performance Practices.** Two hours.

A seminar in the performance of music from selected periods, with emphasis on music composed before 1800. Transcription of older music into forms suitable for performance by modern media. Doctoral students and conducting majors only.

DEPARTMENT OF MUSIC EDUCATION (MED – 680)

William Gower, Chairman

Carnovale Donovan Haynie Johnston Lebsack
Madsen Munsell Neumann Pound Prenshaw Zahrt

COURSE DESCRIPTIONS (MED – 680)

G-423A—**Curriculum Problems in Music Education.** Two hours.

Intensive research into, and discussion concerning, current values and trends in music education in America.

G-423B—**Organization and Administration of School Orchestras and Bands.** Two hours.

Techniques of promoting and maintaining successful orchestras, bands, and instrumental ensembles; research by students; emphasis on problems of marching bands and pageantry.

G-425—**Advanced Strings Methods.** Two hours.

G-427—**Advanced Winds Methods.** Two hours.

A study of basic and advanced techniques in the pedagogy of all the major woodwind and brass instruments, with emphasis upon tone production.

G-429—**Percussion Methods.** Two hours.

G-463—**Principles of Music in Action.** Four hours. Winter and Summer.

Prerequisite: MED 362 or equivalent.

A further refinement in music skills designed specifically for the minor in fine arts for elementary teachers. A laboratory course in basic theory, keyboard, conducting, rhythmics, class instruments, and creative listening. May not be applied toward a Master of Music or Master of Music Education degree.

G-490A, G-491A, G-492A—**Piano Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

G-490B, G-491B, G-492B—**Instrumental Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

G-490C, G-491C, G-492C—**Choral Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

G-490E, G-491E, G-492E—**Elementary Music Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

510—**Advanced Topics in Instrumental Music.** Two hours.

Investigation of current trends and practical topics in instrumental music education, with an emphasis on secondary and collegiate instruction.

512—**Advanced Topics in Vocal Music.** Two hours.

Investigation of current trends and practical topics in vocal music education, with an emphasis on secondary and collegiate instruction.

514—**Organization and Administration of School Music Programs.** Four hours.

A study of the organization, supervision, and evaluation of the total school music program, including problems of finance, in-service training, consultants, and selection of personnel and equipment.

516—**Music Programs for Community and Junior Colleges.** Four hours.

A study of the evolution of music programs in junior colleges throughout the United States, with an emphasis upon influences, programs, and services of junior colleges in Mississippi.

525, 526, 527—**Seminar in Music Education.** Two hours each.

Required of all students pursuing the master's degree in music education. Open by permission to other interested students. This course reviews current philosophies of education and their application to the music curriculum. In addition, the student will engage in studies of individually chosen problems of special interest.

532—**Graduate Conducting I, II, III.** Two hours each.

536—**Band Literature.** Two hours.

A study of band literature from its emergence to present. Emphasis is placed on individual research and preparation of representative literature for performance.

555—**Psychology of Music.** Four hours.

A course designed particularly for the teacher or prospective teacher of music. Review of fundamental concepts from the science of psychology. Special study in the areas of auditory perception, motivation, and personality, leading to an understanding of individual differences in musical capacities and concomitant application in teaching.

556, 557—**Evaluation and Guidance in Music Education I, II.** Two hours each.

The administration and interpretation of tests of musical talent and musical achievement. Practical application of tests results, inventories and other devices used in the teaching and guidance of music students in public schools, colleges, and universities.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

No thesis will be accepted unless accompanied by an abstract. Theses which employ questionnaires will not be accepted unless accompanied by summaries of the findings to be mailed to respondents.

625—**Doctoral Seminar In Music Education.** Four hours.

Orientation to doctoral study. Studies in the history and philosophy of music education.

626—**Doctoral Seminar In Music Education.** Four hours.

Primary focus on advanced research methods, techniques, and procedures appropriate to the doctoral level of music education. Individual projects to develop skill in reporting research.

627—**Teaching Music in Higher Education.** Two hours.

A seminar dealing with problems of teaching music in institutions of higher learning. Doctoral students only.

629—**Administration of College and University Music Programs.** Two hours.

Doctoral students only.

791—**Research in Music Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF THEATRE ARTS (THE – 685)

I. Blaine Quarnstrom, Chairman
Crook Hartwig

For the Master of Arts degree, the Department of Theatre Arts requires successful completion of forty-six (46) hours, thirty-four (34) of which must be in theatre. The remaining twelve (12) hours may be chosen from graduate courses in related fields. Theatre 501 and 506 are required of all students in the program. The remaining twenty-eight (28) hours in theatre will be elected with the advice of the student's committee.

COURSE DESCRIPTIONS (THE – 685)

G-401—**History and Design of Costumes.** Four hours.

Prerequisite: Consent of instructor.

Study of historical and contemporary costume designs and their methods of construction for theatrical presentations.

G-412—**Stage Lighting.** Four hours. Winter.

Prerequisite: Consent of instructor.

Theory and application of general and speical lighting, color, instrumentation, and control.

G-416—**Playwrighting.** Four hours.

Prerequisite: Consent of instructor.

Study and research in the elements of play structuring.

G-417—**Advanced Acting.** Four hours.

G-420—**Advanced Theory of Stage Directing.** Four hours.

Prerequisite: THE 320 or equivalent.

G-421, G-422—**History of The American Theatre.** Four hours each.

G-427, G-428, G-429—**History of European Theatre.** Four hours each

G-430, G-431—**Summer Theatre I, II.** Four hours each.

Prerequisite: Consent of staff.

An eleven-week program covering all phases of theatre production.

G-435—**Advanced Scene Design.** Four hours.

Prerequisite: THE 306 or consent of instructor.

G-480—**Directing Children's Theatre.** Four hours.

Prerequisites: THE 320, THE 420, and consent of instructor.

The techniques of directing, organizing, and administrating a children's theatre program in all phases of application.

G-490—**Theatre Workshop.** Four hours.

Designed for the non-theatre major (i.e., English, speech, music, etc.) who is responsible for directing school or community drama activities.

501—**Introduction to Graduate Study in Theatre.** Two hours.

Seminar in methods and materials of research in theatre; introduction to the bibliography of the field; organization and form of thesis. Initial enrollment in the program must be in this course.

506—**Dramatic Theory and Criticism.** Four hours.

Examination and evaluation of dramatic theory from antiquity to present.

511—**Seminar: Contemporary Trends in Theatre.** Four hours.

512—**Seminar in Theatre Production.** Four hours.

Theory behind newer staging techniques, such as multiple media, and research in other advances in staging.

513—**Seminar in Theatre Design and Structure.** Four hours.

Research in architectural and acoustical design, lighting, seating, color, use and stage requirements.

514—**Seminar in Acting and Directing.** Four hours.

515—**Seminar in Dance, Opera, and Theatre.** Four hours.

516—**Seminar in Community and Regional Theatre.** Four hours.

588—**Practicum in University Theatre.** Four hours.

Directed independent study and practical application in an area of theatre production.

591—**Research in Theatre.** One to four hours.

592—**Special Studies I, II, III.** One to three hours each, for a maximum of 9 hours.

Investigation into specialized areas of interest within the broad area of theatre, with emphasis on individual research.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis in Theatre.** Six hours.

SCHOOL OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

William T. Schmidt, Dean

Clarence E. McCarver, Director of Graduate Studies

The graduate division of the School of Health, Physical Education, and Recreation is divided functionally into three degree granting departments. The Department of Health offers a Master of Science degree. The Department of Physical Education offers three master degree programs and two doctoral degree programs. The Department of Recreation offers a Master of Science degree.

These graduate degree programs are offered for purposes of meeting the following objectives:

1. To prepare students for directing school health programs, for teaching health education, and for service in health agencies.
2. To prepare students for entry into doctoral programs in physical education.
3. To prepare students to be master teachers in physical education.
4. To prepare students to be high school athletic coaches and administrators.
5. To prepare students to be college and university professors of physical education.
6. To prepare students to be recreation and park administrators.

The School of Health, Physical Education, and Recreation has a cut-off score of 700 on the Graduate Record Examinations for conditional admission to the master's degree program. All other requirements as stated in the general requirements in Part IV of this **Bulletin** are applicable.

DEPARTMENT OF HEALTH (HTH – 715)

J. R. Switzer, Acting Chairman

Fagerberg Martin McCarver Webb Yarrow

The Master of Science degree is offered by the Department of Health. The requirements for this program are:

PE: G-401, 544
HTH: 540, 546, 550, 583, 660

Students, with the advisement of the major professor, will take eighteen (18) hours of electives to complete a total of forty-six (46) required hours for the Master of Science degree. Recommended electives may be selected from such

areas as mental health, nutrition, bacteriology, driver training, physical education, and recreation.

COURSE DESCRIPTIONS (HTH – 715)

G-437–**Driver Education.** Four hours.

Driver education provides an opportunity for public school teachers to obtain information on such items as programs of instruction, use of training cars, delegation of authority, legal responsibilities, and qualifications of teachers.

G-453–**Methods of Driver and Traffic Safety Education.** Four hours.

Prerequisite: G-437

Organization and administration of the driver education program, including scheduling, financing, and developing good public relations, will be primary areas of study.

G-456–**Simulation in Driver Education.** Two hours.

Prerequisites: HTH G-437 and G-453.

Simulation is an audio-visual instructional method and has been designed to complement and supplement other instructional techniques utilized in the Driver Education program to prepare individuals to function safely and effectively in today's traffic.

G-482–**Kinesiology.** Four hours.

Prerequisite: HTH 380.

Analysis of movement based on a knowledge of anatomy and physiology as applied to the function of muscles in body mechanics.

540–**Marriage and Family Life.** Four hours.

This course is designed to help students who are interested in programs and materials for marriage and family life; social adjustment problems related to high school and college; special problems of counseling with these groups; and sources and methods of research.

541–**Physiology of Exercise Laboratory.** Two hours.

Use and care of physiology laboratory equipment.

542–**Advanced Physiology of Exercise.** Four hours.

Prerequisite: Proficient physiological background or permission of instructor.

A study which affords the student the opportunity to acquire knowledge about the physiological changes which occur during and after physical activity. The physiological changes include: circulatory, respiratory, endocrine, skeletal, muscular, and nervous systematic adjustments.

546—**Advanced Personal and Community Hygiene.** Four hours.

Intensive study in personal and community hygiene.

550—**Safety Education.** Four hours.

A study of the general program of safety education in public schools, with special reference to the selection and organization of materials, including the methods and techniques of instruction; visual aids, safety projects, special programs, and the utilization of the agencies outside the school.

582—**Advanced Kinesiology.** Four hours.

The objective of this course will be to apply the anatomical and physiological principles of kinesiology to the field of physical education. Students in this course will be involved in a practicum enabling each student to study a practical situation and apply the above mentioned principles.

583—**The School Health Program.** Four hours.

This course deals with the organization and operation of the school health program. Means of developing school health services, safe and healthful school environment, and effective school-community relationships are especially emphasized.

592—**Special Problems I, II, III.** One to three hours.

660—**Community Organization for Health Education.** Four hours.

Study of the philosophies of the community and the organizations that deal with health, with emphasis on group work techniques and their use in organizing the community for work in health education; current research in community organizations, and examination of programs of community health agencies.

791—**Research in Health.** One to twelve hours.

Prerequisite: Approval of the major professor.

DEPARTMENT OF PHYSICAL EDUCATION (PE – 730)

Wayne L. Babin, Chairman

Broom Haley Johnson Milam Slay Stafford Townley

The Department of Physical Education offers three master degree programs and two doctoral degree programs.

PE PROGRAM 1 - Master of Science Degree Program in Physical Education with a Research-Scientific Emphasis

This program is designed to give students a research and scientific background in preparation for post-master's study. The requirements for this program are:

PE: 544, 584, 592, 594, 598
HTH: 541, 542, 582

Students, with the advisement of the major professor, will take fourteen (14) hours of electives to complete a total of forty-six (46) required hours for the Master of Science degree. Recommended electives are: HTH G-482, 546, 660; PE G-401, 540; RED 502; and selected courses in chemistry, biology, or physics. Study of one foreign language is also recommended.

PE PROGRAM 2 - Master of Science Degree Program in Physical Education with Professional Preparation Emphasis

This program is designed to be a terminal degree program which will prepare students for public school and small college teaching. The requirements for this program are:

PE: G-401, 540, 542, 544, 551, 584, 594, 590

Students, with the advisement of the major professor, will take fourteen (14) hours of electives to complete a total of forty-six (46) required hours for the Master of Science degree. Recommended electives are:

HTH: 542, 546, 582, 660; PE 570, 592; AED 516, 520.

PE PROGRAM 3 - Master of Science Degree in Physical Education with Athletic Administration and Coaching Emphasis

This program is designed to prepare students to coach and administer high school athletic programs. The requirements for this program are:

PE: 541, 544, 550, 584, 590
HTH: 542

Students, with the advisement of the major professor, will take eighteen (18) hours of electives to complete a total of forty-six (46) required hours for the Master of Science degree. Recommended courses are: HTH 541, 582; PE 540, 542, 570, 571, 572, 573, 574, 575, 576, 594.

DOCTORAL DEGREE PROGRAM

The School offers the Doctor of Education and Doctor of Philosophy degrees in physical education. Each student will be given a planned program that meets his individual needs as established by his qualifying committee. There are no specific departmental course requirements for the doctoral degree program. It is evident that a number of courses, required for the master's degree in physical education, are basic to an understanding in the area. Doctoral students who have not already completed these courses should consider enrolling in them for purposes of preparing for the qualifying examination.

COURSE DESCRIPTIONS (PE – 730)

G-401–**Corrective, Adaptive, and Developmental Physical Education.** Four hours.

Recognition of and corrective exercises for functional abnormalties.

G-408–**Techniques of Teaching Rhythms.** Two hours.

Practical experiences in group instruction in various areas of dance.

540–**Problems of Administration in Physical Education.** Four hours.

Consideration of problems faced by administrators of physical education, and including such things as staff selection, financial problems, and teacher-student ratio.

541–**Administration of Athletics.** Four hours.

Special emphasis on problems of the athletic director and coach in organizing and directing the athletic program through all levels of the educational structure.

542–**Problems of Curriculum in Physical Education.** Four hours.

Fundamental principles and bases of curriculum construction, analysis of activity for teaching purposes and program planning.

544–**Foundations and Trends in Health, Physical Education, and Recreation.** Four hours.

Scientific bases, history, principles, curricula, and professional preparation in health, physical education, and recreation.

550–**Organization and Administration of Intramural and Extramural Activities.** Four hours.

Theory and practices in the organization and administration of intramural-extramural activities as they relate to finances, facilities, equipment, programming activities, and personnel.

551–**Principles of Teaching Physical Education.** Four hours

Developing personal skills for graduate students in methods of teaching employing physiological and kinesiological principles.

570–**Facilities and Equipment in Physical Education.** Four hours.

Planning facilities for physical education, with special consideration given to recommendations of the Athletic Institute, College Physical Education Association.

571–**Special Athletic Problems - Football.** Two hours.

572–**Special Athletic Problems - Basketball.** Two hours.

573—**Special Athletic Problems - Baseball.** Two hours.

574—**Special Athletic Problems - Track.** Two hours.

575—**Minor Sports.** Two hours.

Modern coaching techniques of swimming, golf, tennis, and other sports of interest.

576—**Care of Treatment of Athletic Injuries.** Two hours.

Modern techniques and facilities for providing adequate prevention and treatment of athletic injuries.

584—**Tests and Measurements in Physical Education.** Four hours.

Tests of fitness, skills, and abilities. Administration and interpretation.

590—**Motor Learning.** Four hours.

This course is designed to investigate fundamental principles of movement in man. Physical and psychological variables essential to motor learning will be considered.

592—**Research Problems I, II, III.** Four hours each.

594—**Seminar in Physical Education and Research Techniques.** Four hours.

Discovery and recognition of problems, evaluation of problems and procedures, types and techniques of research.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

Credit deferred until thesis is completed.

750—**Readings in Physical Education.** Four hours.

Extensive reading and discussion of works of men whose writings have had and will have strong influence on physical education programs in the schools and colleges of the United States.

760, 761, 762—**Physiological Effects of Motor Activity I, II, III.** Four hours each.

A graduate course that allows the student to reach an understanding of various physiological effects of activity and to enable him to pursue further any particular interest in this area.

784—**Principles of Design and Construction of Tests in Health and Physical Education.** Four hours.

Prerequisites: Proficient background in test and measurements or permission of instructor.

Techniques and procedures in designing and constructing tests in health and physical education to include the following: (1) Elements to be measured; (2) Criterion establishment; (3) Preliminary selection of methods of measurement; (4) Characteristics of reliability, validity, objectivity, and practicality; (5) Establishment of final battery; (6) Test manual.

791—**Research in Physical Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

796—**Problems in Health and/or Physical Education I, II, III.** Two hours each.

Research in special physiological problems.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

Credit deferred until dissertation is completed.

DEPARTMENT OF RECREATION (REC – 735)

John King, Chairman

Nesbitt Terry

The Department of Recreation offers a Master of Science degree program. This program is designed to prepare students to be recreation and park administrators. The requirements for this program are:

REC 551, 552, 553, 554, 555, 592; RED 501.

Students, with the advisement of the major professor, will take eighteen (18) hours of electives to complete a total of forty-six (46) required hours for the Master of Science degree. Recommended electives are: REC 598, REC 556, and selected courses in education, political science, sociology, health education, and physical education.

COURSE DESCRIPTIONS (REC – 735)

551–**Gerontology and Recreation.** Four hours.

This course deals with the study of the aging process and recreational services as a technique which may enable the individual to achieve recognition and status within his own community. The emphasis is placed upon the factors that promote intellectual, emotional, spiritual, and social maturity in older people.

552–**Foundations, Trends, and Philosophies of Recreation.** Four hours.

This course deals with the establishment of a discipline for the field of recreational service. Course content is concerned with concepts that are traceable to early Greek philosophy, Renaissance explorations, enlightenment, humanism, and contemporary philosophies of the American culture. The course presents a conceptualization of recreation, its foundation, philosophies, trends, and place in the American culture.

553–**Administration and Supervision in Recreation.** Four hours.

This course deals with the collected knowledge concerning the field of public administration, its principles, techniques and practices, particularly as it pertains to recreational agencies which provide unique services to the public at large; and more generally to the supervisory process and administrative leadership in recreational agencies.

554–**Evaluation in Recreation.** Four hours.

This course contains such vital procedures as: the quantitative and qualitative gathering of information about the recreational program; the creation of standards and the most effective means of comparison with known standards in the recreational process; the use of research techniques to discover the needs of people, to appraise existing facilities, to gauge public sentiment regarding program, to discern departmental development.

555–**Outdoor Education and Camping.** Four hours.

This course contains phases of outdoor education concerning conscious recognition and identification of natural phenomena which includes: (1) an introduction to the elements and philosophy of outdoor education as it is related to recreation; (2) the integration of the arts and sciences in outdoor education; (3) fundamentals of outdoor living or camping; and (4) methods of programming in an outdoor setting.

556–**Organization and Administration in Hospital Recreation Service.** Four hours.

This specialized professional course deals with the organization and administration of hospital services. It provides needed information of types of diseases, disabilities, and other infirmities to be encountered in various types of hospitals, and medical terminology utilized by the professional medical and technical staff in the hospital environment. Diseases that hospitalize people are

studied with the aim of providing recreational experiences for the hospitalized person.

557—**Methods, Observation, and Participation in Hospital Recreational Service.** Four hours.

This course is designed to help the student understand the need for varying types of activity in relation to the disease or disability of the patient.

592—**Problems in Recreation.** Four hours.

Special attention to problems in recreation, including small town recreation, the school and recreation, coordinating community recreation services, field trips, public relations, program planning for given situations, and survey for recreational needs.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

SCHOOL OF HOME ECONOMICS

Sarah L. Weaver, Dean

Chichester Drain Faulkinberry Golden Hamman McCarthy Milner

Graduate work in the School of Home Economics offers the opportunity to earn the Master of Science degree.

GENERAL POINTS

I. Graduate work in the major field of specialization must be preceded by course work sufficient to satisfy undergraduate requirements for a major or enough related work to indicate the student's ability to do graduate work in his major field. Graduate work in the minor field of specialization must be preceded by at least enough course work to satisfy the undergraduate requirements for a minor or enough related work to indicate that the student can successfully do graduate work in the minor field. Deficiencies in a student's background in his major fields of specialization may be made up by auditing recommended undergraduate courses.

A. **Major and Minor Areas.**

1. Suggested **major** areas:

   Child Development
   Family Living
   Home Economics Education
   Institution Management

2. Suggested **minor** areas:

   Child Development
   Clothing and Textiles
   Equipment
   Family Living
   Food and Nutrition
   General Home Economics
   Home Management
   Psychology
   Sociology

B. **Suggested Combinations:**

Major	Minor
Child Development	Family Living or Food and Nutrition
Family Living	Child Development or Food and Nutrition or Home Management
Home Economics Education	General Home Economics
Institution Management	Food and Nutrition or Equipment

II. Upon the completion of the graduate program, a comprehensive oral examination covering major and minor fields will be required to fulfill the qualifications for a degree.

III. Students may have the option of the thesis plan or the non-thesis plan. A four-quarter-hour course in research must be completed regardless of the choice of plan – thesis option or non-thesis option. Those preparing for teaching on the college level or for supervisory positions in home economics are advised to write a thesis. Others may follow the non-thesis plan.

A. Thesis Plan

1. Home Economics Education majors . . . . . 48 hours

Major Area . . . . . 24 hours

CIF 504 . . . . . 4 hours
Thesis (598) . . . . . 6 hours
RED 501 . . . . . 4 hours
Other . . . . . 10 hours

Minor (General Home Economics recommended) . . . . . 24 hours

2. Other Home Economics majors . . . . . 46 hours

Major Area . . . . . 24 hours

RED 501 . . . . . 4 hours
Thesis (598) . . . . . 6 hours
Other . . . . . 14 hours

Minor 16
Electives 6

B. Non-Thesis Plan

All students working toward the Master of Science degree in Home Economics must meet the following requirements:

1. Twenty (20) hours in a major area. Four (4) to six (6) hours of this work are to be a field study, a special program, or an internship in or related to the specialized area (Example: Graduate work at Merill Palmer as approved in 1955). This part of the program must be preceded by RED 501, or the equivalent, and sufficient course work to satisfy the student's advisory committee.
2. Sixteen hours (16) for a minor in an area other than that of the major.
3. Four (4) hours of RED 501.
4. Six (6) additional hours of electives (making total hours forty-six.)

Home Economics Education majors must meet the following requirements (forty-eight (48) hours):

1. CIF 504 (Four (4) hours) must be taken as a part of the twenty (20) hours required for the major.

2. Twenty-four (24) hours for a minor in an area other than Home Economics Education. General Home Economics is recommended.
3. RED 501 (four (4) hours).

COURSE DESCRIPTIONS

CHILD DEVELOPMENT (CD - 805)

G-420—**Advanced Child Development.** Four hours.

This course is for students interested in further study of pre-school children and in developing techniques and accepting full responsibilities in the daily activity of the nursery school.
Special problems will be included on the graduate level.

G-450—**Symposium in Child Development.** Two hours.

Prerequisite: Consent of instructor.

A study of theories and recent research used in preschool education; role of preschool education in the total education system. For home economics teachers, preschool teachers, and others interested in experience in the guidance of young children.

592—**Special Problems in Child Development.** Two to six hours.

594—**Seminar in Child Development.** Two to six hours.

596—**Research in Child Development.** Two to six hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

CLOTHING AND TEXTILES (C&T – 810)

G-452—**Textile Testing.** Four hours.

Two 1-hour and two 2-hour periods per week.

Prerequisite: C&T 312 or 360 or approval of department chairman.

Testing apparel and household textile fabrics by standard ASTM and AATCC methods; interpreting and evaluating test results; application of data to better consumer understanding and practices.

G-456—**Textile Economics.** Two hours.

Prerequisite: C&T 312 or C&T 360 or the equivalent.

A study of problems which affect the consumer in the production, distribution, and consumption of textiles and clothing. Survey of recent developments in the textile and clothing field.

G-460—**Apparel Design.** Four hours.

Prerequisite: C&T 304, 312, or 360.

Development of original designs for apparel items.

550—**Demonstration Techniques and Preparation of Teaching Materials in Clothing and Textiles.** Four hours.

Prerequisite: Minimum of 12 credit hours of clothing and 4 credit hours of textiles.

555—**Speed Techniques and Coordinated Pattern Manipulation in Clothing Construction.** Four hours.

Prerequisite: 12 hours undergraduate work in clothing or permission of instructor.

560—**Apparel Designing Through Draping.** Four hours.

Two 1-hour and two 2-hour periods per week.

Prerequisite: Permission of instructor.

Creative dress design through draping principles and procedures; study of leading designers, their techniques, and places in the market.

565—**Flat Pattern Design.** Four hours.

Two 1-hour and two 2-hour periods per week.

Prerequisite: Permission of instructor.

Creative dress design through the principles and application of flat pattern techniques; emphasis on solving figure problems; study of manufacturing process of commercial patterns; setting sizing standards.

570—**Textiles: Recent Developments.** Two hours.

Prerequisite: C&T 312 or 360 or equivalent.

592—**Special Problems in Clothing and Textiles.** Two to six hours.

596—**Research in Textiles and Clothing.** Two to six hours.

Prerequisite: Permission of instructor.

FOOD AND NUTRITION (F&N – 815)

G-442—**Experimental Foods.** Four hours.

Prerequisite: F & N 285.

G-444—**The School Lunch.** Four hours.

G-459—**Institution Food Purchasing.** Four hours.

G-476—**Diet in Disease.** Four hours.
Prerequisite: F & N 335.

G-478—**Advanced Nutrition.** Four hours.
Four 1-hour periods per week.
Prerequisite: F & N 335.

575—**Community Health and Nutrition.** Four hours.

577—**The Nutrition of Children.** Four hours.

578—**Quantity Food Preparation.** Four hours.
Prerequisite: Approval of instructor.
One lecture and six hours of laboratory per week.

592—**Special Problems in:**

a. Nutrition. Two to six hours.
b. Institution Management. Two to six hours.

594—**Seminar in Food and Nutrition.** Two to six hours.

596—**Research in Food and Nutrition.** Two to six hours.

579—**School Lunch Supervision.** Four hours.

580—**Institution Organization and Administration.** Four hours.
Analysis of quantity food service operations as related to methods of control, selection and training of personnel, labor laws, employer-employee relationships so as to produce a system of order into a group of related activities and provide the means for their direction and development.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

HOME ECONOMICS EDUCATION (HEE – 820)

500–**Supervision of Home Economics.** Four hours.

Designed for high school home economics teachers interested in the student-teacher program. The course stresses the supervisory practices and procedures for promoting student-teacher growth and development. Supervisory probelms in guidance of students for home economics education teachers will be included.

502–**Home Economics in American Education.** Four hours.

This course is a brief survey of home economics in American education. It is designed to give understanding of the trends and issues in curriculum development, instruction, guidance, supervision, administration and research in this field.

504–**Curriculum Problems in Home Economics.** Four hours.

A course for teachers which deals with problems in curriculum making. It will include the place of home economics education in the total school curriculum for that specialized area. Opportunity will be given for students to work out practical problems relating to their local schools.

510–**Home Economics in Higher Education.** Four hours.

Home economics at the college level will be studied with special reference to that of the junior college. Problems in development of the curriculum, in college instruction, in guidance of students, in administrative problems, and in evaluation of a department will be considered.

514–**Teaching Home Economics to Adults.** Four hours.

A study of the adult home economics education programs with experiences which will help toward effective participation in them whether for the gainfully employed or the full-time homemaker. Special problems will be included.

516–**Consumer Home Economics Education.** Four hours.

A course designed to acquaint the student with consumer problems in our present day society. Curriculum materials pertinent to teaching consumer education on the secondary level will be developed.

552–**Teaching Family Living on the Secondary Level.** Four hours.

592–**Special Problems in Home Economics Education.** Two to six hours.

594–**Seminar in Home Economics Education.** Two to six hours.

596–**Research in Home Economics Education.** Two to six hours.

597–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

HOUSING AND HOME MANAGEMENT (H&HM – 825)

540—**Home Engineering.** Four hours.

This course includes a study of the selection, placement, and storage of home appliances and their use as related to the mechanical features. Considerable time will be spent in design characteristics of the various appliances and the media used. The adaptation of certain activities to adult programs, as well as to the junior and the senior high school, will be made.

592—**Special Problems in any of the Following Areas:** Two to six hours.

a. Household Equipment
b. Housing
c. Home Furnishings
d. Home Management

MARRIAGE AND FAMILY LIFE (M&FL – 830)

550—**Early Marriage Adjustments.** Four hours.

A study will be made of college marriages.

551—**The Family in the Community.** Four hours.

Designed to help the teacher understand better the social setting in which students live and its importance in the development of family living courses to meet student needs.

554—**Parents and Children.** Four hours.

592—**Special Problems in Family Living.** Two to six hours.

594—**Seminar in Family Living.** Two to six hours.

596—**Research in Family Living.** Two to six hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

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